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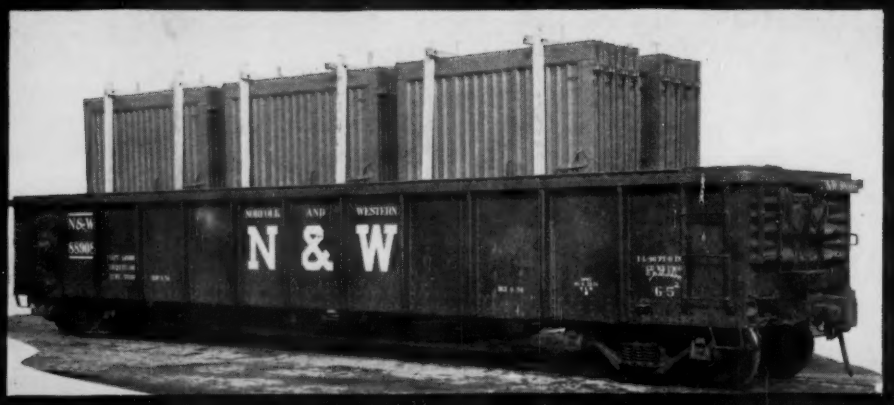
PROMPT DELIVERY
of Your Requirements for

CAR DOORS and CAR SIDES



YOUNGSTOWN STEEL DOOR COMPANY
CAMEL SALES COMPANY • CAMEL COMPANY LIMITED
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BRAKEMAN Gets a Break!

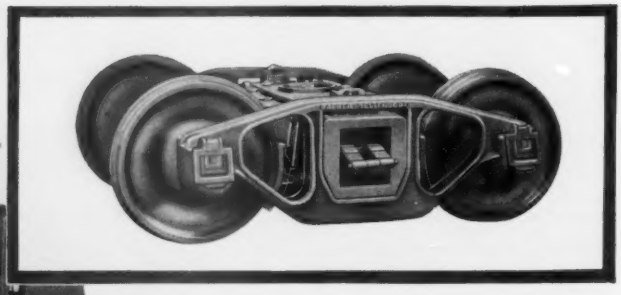
HOW HE GOES FOR THAT *SWING-MOTION* RIDE...

Barber-Bettendorf Swing-Motion Trucks treat your trainmen to a comfortable ride . . . and they're good business for you, too. Trip fatigue and irritation are reduced; trainmen remain alert and efficient . . . and it's a *safer* ride! The severe lateral shocks and thrusts of today's high speed freight operation are properly cushioned.

Built like passenger car trucks, Barber-Bettendorf Swing-Motion Trucks have a bolster and elliptical spring assembly suspended by four off-center swing hangers, inside a one-piece cast steel transom. The bolster swings; the off-center suspension tends to bring the car body back into line, minimizing side shocks. Send for detailed information. Standard Car Truck Company, 332 S. Michigan Ave., Chicago 4, Ill. *In Canada:* Consolidated Equipment Co., Ltd., Dominion Square Bldg, Montreal 2.

BARBER-BETTENDORF

Caboose by: International Railway Car Co., Kenton, Ohio. *Trucks:* Standard Car Truck Co., Chicago.



SWING-MOTION

CABOOSE CAR TRUCKS

A. SAFETY TIMBER BOLT. Lugs under head prevent bolt from turning when tightened. Spiral ribs under head retard water seepage. Head lies close to timber as there is no protruding wrench square.

B. BRIDGE BOLT. Has wrench head, and integrally forged washer. Saves time, as it is easier to install than machine bolt and cast-iron washer.

C. HIGH-STRENGTH BOLT. This carbon-steel bolt, heat-treated, joins structural members so tightly that joints effectively resist effects of vibration. Used with two hardened washers, placed under head and nut. Can occupy holes drilled for rivets. Installed with pneumatic impact wrench.

BOLTS
for Bridge Construction

If you are planning bridge construction or repair, you'll want to look into the Bethlehem bridge bolts shown here. They come in a wide size range, and can be counted on for long service. In addition to bridge bolts, Bethlehem turns out many other types and sizes of headed and threaded items for railway applications. Bethlehem Bolts can be furnished in carbon and alloy grades, plain or galvanized, with cut or rolled threads, and with square or hexagon nuts. Tell us about your requirements.

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BETHLEHEM STEEL

BETHLEHEM STEEL

Why not run trains in

← Either direction →

on both tracks...

with UNION C.T.C.

In double-track territories a traffic control system arranged to govern train movements in *either* direction on *both* tracks gives the greatest benefits.

Crossovers, under the direct control of the operator, permit trains to pass from one track to the other . . . fast trains can run around slower ones, and both keep moving at normal speeds. Heavy repairs can be made on one track without traffic interruptions.

With such an arrangement of UNION C.T.C., many railroads have increased their track capacity, eliminated congestion by reducing unnecessary delays and obtained maximum flexibility of operation. The cost of such reverse running signaling added to a basic single-direction system is very small percentagewise.

Union Switch & Signal is prepared to analyze your traffic control problems for you through a competent staff of traffic control engineers. Write or call our nearest office for complete information.

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

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August 22, 1955 **Vol. 139, No. 8**

Week at a Glance

July was the fourth successive month in which freight car orders showed an increase over the preceding month; July orders, in fact, nearly equaled those for the three preceding months combined. 7

FORUM: The effort grows to discredit the Cabinet report on transportation. The attack being made upon it raises a fundamental question as to whether complex national decisions on economic problems are to be made on the advice of experts, or as a result of pressure group propaganda. 33

Why use punch-card purchase orders? The Western Maryland finds they eliminate errors, reduce inventory, cut clerical work and result in fewer "rush" orders. 34

What's different about the EMD reefer? A good many points distinguish the new "Frigifrater" (*Railway Age*, August 8, page 10) from the traditional refrigerator car. 36

Why not a full-door box car? A new idea, still only in the formative stage, may simplify loading of some commodities without introducing another specialty car. 41

A track gang that slashes costs is renewing ties and surfacing track for the Erie on a mechanized production-line basis. 43

BRIEFS

A new type of box car, with overhead garage-type sliding doors along the full length of its sides, will reportedly be displayed—in model form—at the September meetings of the Coordinated Mechanical Associations.

Taxes on New Jersey railroads — already around five times higher per mile than the national average—would be trebled or quadrupled, under a theory just

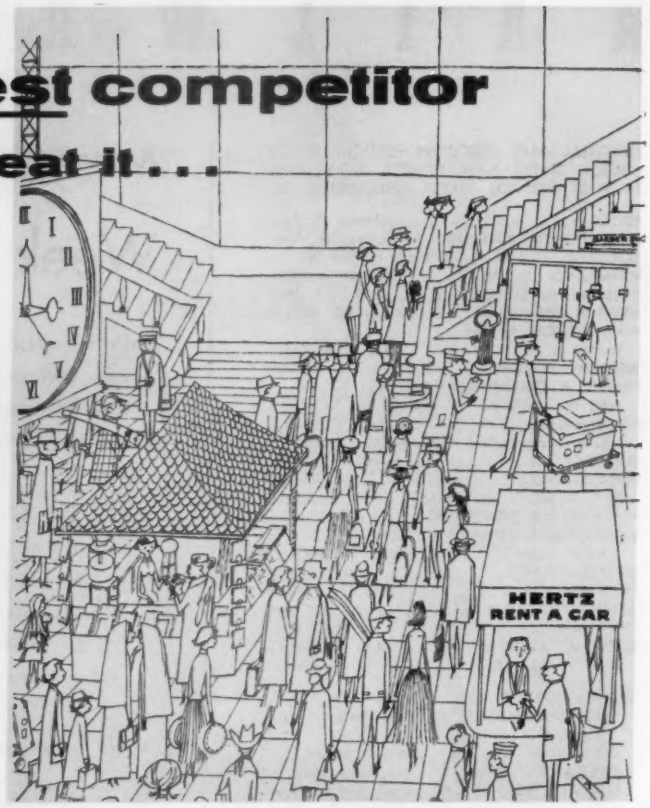
your biggest competitor

and how to beat it . . .

with the

HERTZ

rail-auto travel plan!



Your biggest competitor, of course, is the private automobile, which last year was largely responsible for the 9 per cent *drop* in railroad passenger miles!

The Hertz Rail-Auto Travel Plan has already switched millions of passenger miles from rubber to rail . . . and it can switch millions more.

What is the potential? Well, last year motorists drove an estimated 520 *billion* miles between cities . . . not because they wanted to, but because of the need of cars at their destinations. That's the potential that awaits tapping. And the way to tap it is the Hertz Rail-Auto Travel Plan!

HOW YOU CAN SWITCH EXTRA PASSENGER REVENUE TO YOUR RAILROAD WITH THE HERTZ RAIL-AUTO TRAVEL PLAN

1. TRY the Rail-Auto Travel Plan yourself. Enjoy its many advantages. See for yourself why thousands of travelers prefer it to highway travel.

2. TELL your ticket agents about the 10% commission Hertz pays them. Urge them to ask passengers this simple question: *"May I reserve a car from Hertz at your destination?"* It takes only a few minutes to fill out the reservation forms . . . and the Hertz office concerned will pay—promptly—10% commission on the total rental charge.

3. FREE! To remind your passengers of Hertz Service and the Rail-Auto Travel Plan, Hertz provides 3¼" signs attractively printed with these words: *"Reserve your Hertz Rent A Car from your ticket agent."* These signs clamp on the grill of your ticket agents' windows.

Hertz also provides for the counters of your ticket agents and for ticket envelopes, small 2" x 4½" folders describing Hertz Service and the Rail-Auto Travel Plan. Both items are available in any quantity at no charge.

4. HERTZ now spends over $1,000,000 a year in leading national magazines to sell the Rail-Auto Travel Plan. In your own advertising, *promote* the Plan. *Show* its many advantages. Use *displays* in your ticket offices. *Advertise* the Plan in your timetables . . . on your *billboards* . . . highway over-passes.

5. AND REMEMBER—only Hertz—the world's largest rent a car system—offers 30 years' experience . . . with more than 10,700 cars at nearly 900 offices in over 550 cities throughout the world. Every car is new, clean . . . and Hertz furnishes all gasoline, oil . . . Public Liability, Property Damage, Fire and Theft Insurance, and $100.00 deductible collision protection—*at no extra cost!* Hertz has more than 1,500,000 people who hold Hertz Charge Cards and Courtesy Cards. Also, Hertz honors Rail Credit Cards.

6. HERTZ will install service counters or direct line "Call a Car" phones in your terminals on concession. This added service has proved to be directly and indirectly profitable for many railroads–through the additional Rail-Auto travel they promote. For full information, or for reservation forms and display material, write direct to Hertz Rent A Car System, Department D85, 218 South Wabash Avenue, Chicago 4, Illinois. Phone: WEbster 9-5165.

HERTZ *Rent A Car* **SYSTEM**

Dept. D85, 218 S. Wabash Ave., Chicago 4, Illinois; Phone: WEbster 9-5165

Current Statistics

Operating revenues, six months	
1955	$4,820,336,062
1954	4,591,252,244
Operating expenses, six months	
1955	$3,645,751,965
1954	3,683,934,579
Taxes, six months	
1955	$ 521,641,721
1954	440,067,072
Net railway operating income, six months	
1955	$ 526,830,860
1954	342,337,672
Net income, estimated, six months	
1955	$ 416,000,000
1954	232,000,000
Average price railroad stocks	
August 16, 1955	92.80
August 17, 1954	71.86
Carloadings, revenue freight	
Thirty-one weeks, 1955	21,798,089
Thirty-one weeks, 1954	19,801,423
Average daily freight car surplus	
Wk. ended August 13, 1955	4,645
Wk. ended August 14, 1954	81,270
Average daily freight car shortage	
Wk. ended August 13, 1955	13,244
Wk. ended August 14, 1954	417
Freight cars on order	
August 1, 1955	42,888
August 1, 1954	12,889
Freight cars delivered	
Seven months, 1955	19,340
Seven months, 1954	25,403
Average number of railroad employees	
Mid-June 1955	1,075,084
Mid-June 1954	1,073,847

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Week at a Glance CONTINUED

developed by Jersey City politicians. The idea seems to be that railroads (and only railroads) should be taxed on what their facilities would cost if built new at today's prices for materials and labor. (New Jersey is the state which has spent $690 million to build two tax-free turnpikes, but raised a railroad's taxes for planting rose bushes to beautify a station.)

The first railroad in Cuba to use two-way radio, the Consolidated, is now completing a new 100-unit Motorola FM VHF system, with installations on 82 diesel locomotives and 10 cabooses and in eight base stations.

Latest railroad to display active interest in piggyback is the Norfolk Southern, according to J. F. Dalton, its director of agricultural and industrial development. Meetings with northern carriers to study such operations have been held recently, he has revealed.

World commerce advertising has been started by the Chesapeake & Ohio in a new series of insertions in domestic and foreign periodicals in which the advantages of that road's port facilities are described.

Improved rail-motor service from the U. S. and Canada to interior Alaska is now available, via the Northern Alberta to Dawson Creek, B. C., and the Alaska highway. The service, operated by Amalcan Freight Expediters of St. Paul, is said to be competitive in both rates and time with steamship service via Seattle.

A refunding plan—described by an observer as "probably the biggest and certainly the most exciting" in the history of railroad finance—is expected to be presented shortly by the Baltimore & Ohio to holders of its existing callable mortgage obligations and to the general public. If it goes through, the plan, which reportedly involves an offer, at par, of some $280 million of first consolidated mortgage bonds, will give the B&O a "thoroughly modern" mortgage, improve its credit rating, and give it a capital structure "as clean as a hound's tooth."

MORE CARS for your money

plus a BIGGER RETURN per dollar of car investment

...with LOW-COST SOLID BEARINGS

When you buy new freight cars, you want the maximum in car availability and income-producing potential. Here's why you get it with solid bearing freight cars:

1st You can buy up to 10% more solid bearing cars for the same money. That means an extra 100 income-producing cars for each 1000-car investment.

2nd The 100 extra solid bearing cars will yield additional net revenue of from $250,000 to $400,000 per year — income that would be *lost* if any other type of high-cost bearings were applied*.

3rd Suppose you don't *need* the extra 100 cars. Then you reduce your initial investment by approximately 10% and get the same increase in return *per dollar* represented by the $250,000 to $400,000 above.

Analyze the performance of solid bearings and you find that the average car has *only one set-off for bearing difficulties every 12 years* — even though this average car is almost 20 years old! You can bet that cars with high-cost journal bearing assemblies will have a tough time beating this record.

What's more, there are low-cost ways to improve solid bearing performance even further — cut maintenance and operating costs, too — and still keep the same big advantages of low initial investment and high earning power. Write us for complete information. Magnus Metal Corporation, 111 Broadway, New York 6; or 80 East Jackson Blvd., Chicago 4.

MAGNUS
Solid Bearings

* *Based on analysis of independent study of solid-bearing operating costs. Copies of analysis on request.*

MAGNUS METAL CORPORATION *Subsidiary of* **NATIONAL LEAD COMPANY**

Freight Car Orders Up Again

July is fourth successive month to show increase—August 1 backlog rises to 42,888 units

July was the fourth successive month in which orders for new freight cars increased over those placed in the preceding month, according to a joint announcement by the American Railway Car Institute and the Association of American Railroads.

Orders placed during July, the announcement said, totaled 18,007 cars, compared with 13,365 in June, 3,041 in May, 2,706 in April, and only 883 in July 1954.

July deliveries of new freight cars, on the other hand, fell to 2,192, from 3,015 in June and 4,083 in May. New car deliveries in July 1954 totaled 1,801.

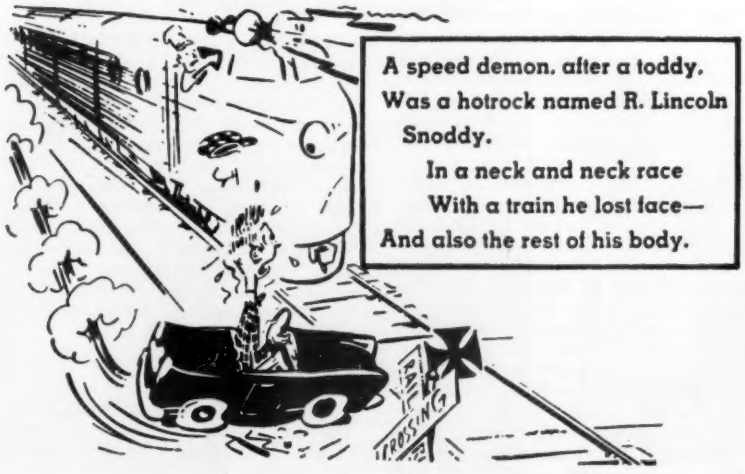
The backlog of freight cars on order and undelivered as of August 1 was up to 42,888 units, compared with 27,102 on July 1, 16,886 on June 1, and 12,889 on August 1, 1954.

A breakdown, by types, of cars ordered and delivered in July, and of cars on order August 1, appears in the following table:

Type	Ordered July '55	Delivered July '55	On Order Aug. 1, '55
Box—Plain	9,926	1,121	22,515
Box—Auto	0	0	200
Flat	950	164	1,948
Gondola	1,435	159	2,742
Hopper	3,700	50	7,334
Covered Hopper	505	307	2,658
Refrigerator	425	64	864
Stock	0	0	300
Tank	816	267	3,507
Caboose	100	9	272
Other	150	51	548
TOTAL	18,007	2,192	42,888
Car Builders	9,613	1,284	24,140
Company Shops	8,394	908	18,748

Look . . . Listen . . . LIVE

Presented as a public service by this newspaper and the New York & Long Branch Railroad


A speed demon, after a toddy.
Was a hotrock named R. Lincoln Snoddy.
In a neck and neck race
With a train he lost face—
And also the rest of his body.
RAIL ROAD CROSSING

LOCOMOTIVES outweigh your automobile by about 100 tons. In a race to a grade crossing, trains win all ties!

LIMERICKS FOR SAFETY are part of the New York & Long Branch's campaign to reduce grade-crossing accidents. Above is one of seven cartoon-plus-limerick illustrations offered by the railroad to newspaper editors along its line. (See also New York & Long Branch item on page 10.)

INDEX TO VOLUME 138

The index to the latest volume of *Railway Age*, January-June 1955, is ready for distribution, and copies may be obtained by those subscribers desiring them. Requests should be addressed to Circulation Department, *Railway Age*, 30 Church st., New York 7. Subscribers who have, in previous years, made application for the index need not apply again.

Car Service Division Lists Car Shortage Steps

The Car Service Division of the Association of American Railroads has circulated to member roads a thirty-five point statement recommending ways to reduce the car shortage through improved freight car utilization.

The statement emphasizes prompt movement of all cars and efficient methods of handling both loaded and empty cars in addition to quick placing of embargoes against consignees who have accumulations of delayed cars. It also calls for quick repairs to bad order cars and suggests that shippers and receivers be urged to cooperate in the effort to achieve maximum car utilization through such steps as prompt and complete loading and unloading, and placement of advance car orders and selection by shippers of available cars to facilitate advancing cars to, towards or via owner rails.

Quick Write-Off Program On Freight Cars Suspended

The Office of Defense Mobilization has suspended issuance of "fast write-off" certificates in 38 categories including those for diesel locomotives, freight and passenger cars and railroad terminal and road facilities.

The suspension is to continue while a review is made to determine, the ODM announced, "whether adequate productive capacity exists to meet defense mobilization requirements" in those categories.

Under the "fast write-off" plan, tax relief was granted in the interests of building up the mobilization capacity by permitting amortization of certified defense facilities over a period of five years.

The ODM action followed conclusion of Congressional hearings which were intended to determine the future of the program. Interstate Commerce Commissioner Owen Clarke defended the pro-

gram in an appearance before the Congressional subcommittee (*Railway Age*, July 18, page 7) as did ODM Director Arthur S. Flemming.

The suspensions, nevertheless, were ordered by Mr. Flemming even as he closed 19 non-transport categories. The ODM announced that new applications would be accepted during the suspension period in the suspended categories but that no further processing would be done before the review is completed. At the end of the review period, ODM said, the 38 suspended categories will either be reopened or closed.

Other transportation categories that were suspended include commercial aircraft and airports, inland waterway terminals and vessels, Great Lakes and ocean-going ore carriers, and motor truck terminal and repair facilities. Twenty categories were left open, none of these in the transportation industry. A total of 225 categories or "expansion goals" was originally established.

LOCOMOTIVES

Virginian Orders 12 New Electric Locomotives

The Virginian has ordered 12 3,300-hp, 197-ton, ignitron rectifier electric locomotives of the road-switcher type from General Electric Company, for delivery beginning in October 1956. The locomotives, with a C-C wheel arrangement and single cabs, control stations, and pantographs, are designed to operate on the Virginian's 11,000-volt, 25-cycle a-c catenary electric system. By using high-capacity rectifier tubes, the six traction motors per unit will have bridge type connection, giving the equivalent of motors in parallel with transitions eliminated over the complete operating range. Dynamic braking with retarding effect up to 63,000 lb at 25 mph is included in the locomotive design.

The **Manila Railroad** (Philippine Islands) has ordered from the International General Electric Company 30 1,200-hp diesel-electric road locomotives and 10 500-hp diesel-electric switchers. The road locomotives will have a C-C wheel arrangement, and the switchers a B-B wheel arrangement. Twenty of the road locomotives will have cabs similar to those on road-switchers; the other 10 will be fitted with box cabs. The 1,200-hp units have Cooper-Bessemer engines and the 500-hp engines are supplied by Caterpillar.

The **Savannah & Atlanta** has ordered one 1,600-hp general-purpose diesel-electric unit from Baldwin-Lima-Hamilton Corporation.

The **Western Pacific** has ordered eight 1,750-hp general-purpose diesel units from the Electro-Motive Division of General Motors Corporation. The locomotives, which are estimated to cost $1,488,000, are scheduled for delivery in December. Authorization for their purchase was reported in *Railway Age*, May 9, page 13.

FREIGHT CARS

SP Ordering 2,725 Freight Cars at $23 Million

The Southern Pacific has received board authority to acquire 2,725 freight cars at a total cost of $23 million.

The road's Sacramento, Cal., shops will build 2,350 box cars while, for the first time, Englewood yard, Houston, Tex., will be called upon to produce cars in quantity also—100 50-ton pulpwood cars. In addition, 275 70-ton open hopper cars will be purchased from a commercial builder.

Of the total box car order, 1,750 cars will be 50-ton, 50-ft, double-door cars; 250 will be of this type but equipped with boom-type automobile loading equipment; and 350 cars will be 50-ton, 50-ft, single-door cars equipped with "DF" loading equipment. These latter cars will, in addition, have the new hydra-friction underframe developed through joint research by the SP and Stanford Research Institute. An SP spokesman said this was the first mass-production order for the new type underframe, which was described in the May 9 *Railway Age*, page 30.

The **Union Pacific** has ordered, from its company shops, 200 box cars with 8-ft doors and 300 automobile box cars with 15-ft doors; and, from the General American Transportation Corporation, 50 70-ton "Airslide" covered hopper cars with built-in mechanical devices for unloading, for transportation of flour.

PASSENGER CARS

The **Canadian Pacific** has ordered three self-propelled rail diesel cars (RDC's) from the Budd Company. The first unit, an all-passenger coach (RDC-1), is scheduled for delivery this month. The other two units, one of which will accommodate passengers and baggage (RDC-2), and one of which will carry mail and baggage only (RDC-4), are for delivery in September.

The **Richmond, Fredericksburg & Potomac** has ordered from Pullman-Standard Car Manufacturing Company two 52-seat lightweight stainless steel coaches for use in through-line service. The cars are scheduled for delivery in the fourth quarter of this year.

New Facilities

New 45-Mile Ore Railroad May Connect with QNS&L

The government of Newfoundland has agreed—subject to legislative approval—to guarantee a $16.5-million bond issue to assist in the construction of a new ore-carrying railroad in Labrador, according to an August 11 statement by Premier Joseph Smallwood.

Purpose of the new railroad would be to tap open-pit iron ore deposits, said to measure "at least 1,162,000,000 tons," and described by Premier Smallwood as "perhaps the world's greatest," in the vicinity of Wabush Lake. The line itself would run from a connection with the existing Quebec North Shore & Labrador (*Railway Age*, October 4, 1954), in the vicinity of the latter's MP 224, to the new Wabush deposits, south of the Schefferville mines which the QNS&L was built to serve. The Wabush ore would move over the new line to the QNS&L connection, and thence over the latter—which is a common carrier—to tidewater at Seven Islands, Que.

Total cost of the new development is estimated at "more than $32 million," about half of which is represented by the Newfoundland-guaranteed bond issue, and half of which will be supplied by the developers of the Wabush Lake mines—Canadian Javelin, Ltd., of Montreal, which has a 100-year agreement with Newfoundland. About half the total cost is expected to be spent on the railroad and its rolling stock.

According to John C. Doyle, Canadian Javelin chairman, "The contract for the building of the railroad will be let almost immediately and work on construction of the roadbed will get under way in the present season and continue until weather forces a close-down." Mr. Doyle also predicted that, with an estimated working force of from 1,200 to 1,500 men, the railroad would be completed by the summer of 1956, and that during the following year Canadian Javelin would ship from two to three million tons of ore.

•

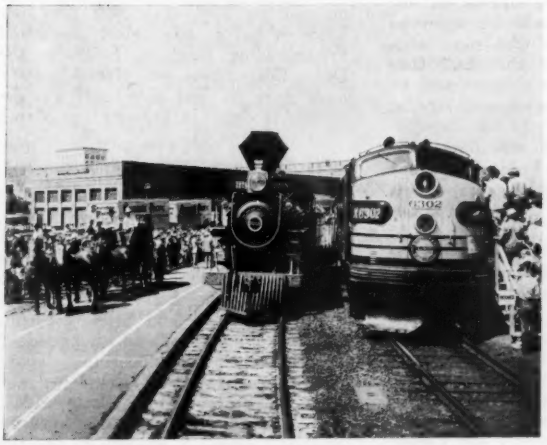
Atchison, Topeka & Santa Fe.—The ICC has approved the joint application of the Panhandle & Santa Fe and Kansas City, Mexico & Orient, both Santa Fe subsidiaries, for construction by the KCM&O and operation by P&SF of a 19.7-mile spur between Maryneal, Tex. and Silver. The line, whose construction was opposed before the ICC by the Texas & Pacific, is to serve a plant processing liquified petroleum gas (*Railway Age*, January 10, page 189).

Chesapeake & Ohio.—Plans and specifications are being prepared for expansion of diesel shops at Russell, Ky. The work, expected to start within a month, and to cost approximately $400,000, will add about 50% to the capacity of present diesel repair and maintenance facilities. It is being undertaken in view of the enlargement in the C&O's diesel fleet which will result from receipt later this year of new locomotives now on order (*Railway Age*, May 23, page 13).

The C&O has begun a $600,000 track improvement program in the Charleston, W. Va., area. A 135-man gang is laying 4,000 tons of new heavy-duty rail on 16 miles of track at four locations between Marmet and St. Albans.

Erie.—A new 45-ft by 17-ft brick station at Rowe street, Bloomfield, N.J., on the Greenwood Lake division, is now in service. The new track-level facility replaces stations at Orchard street and Walnut street; the latter was abandoned a year ago to make room for New Jersey's Garden State parkway.

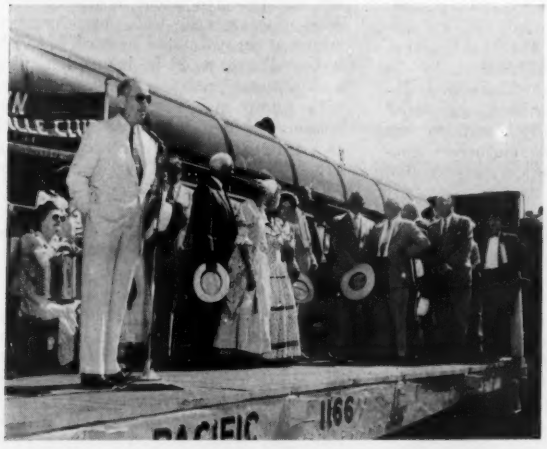
Long Island.—New switching and signaling facilities, now nearing completion at a cost of approximately $100,000, will increase the capacity of the LI's Jamaica, N.Y., station by the equivalent of two extra tracks. The project, part of the road's long-term "redevelopment" program (*Railway Age*, August 15, page 34), involves three sets of switches east of the station, and will make it possible for eastbound express trains to bypass the station on westbound tracks during the evening rush hour. A future addition west of the station will permit



SP MARKS WESTERN LINES' CENTENNIAL

FROM DIAMOND STACKS to piggybacks, and from the four-horse stage to the diesel streamliner—central Californians saw them all at Sacramento during the Southern Pacific centennial observance of the Sacramento Valley Railroad—23-mile gold rush line into the Sierra Nevada foothills and oldest predecessor of SP's western lines.

DESPITE 100-DEGREE HEAT, a crowd of 7,000 turned out to watch the full-scale pageant, "From Trails to Rails." They also heard part of what may have been the greatest mass locomotive horn and whistle blowing in history. At 10:30 a.m., California Daylight Time, every SP locomotive from Louisiana to Oregon sounded off for 10 seconds.



PRESIDENT D. J. RUSSELL (standing at microphone) contrasted construction of Sacramento Valley cars (built "as best they could along the river bank") with present-day Sacramento shops and stores (where "freight cars are being turned out at the rate of 12 a day; locomotives of all types are repaired; passenger cars built, and almost every conceivable item used in running a railroad is manufactured"). Here on the flat car podium, with Mr. Russell, are top SP officers, civic officials, and actor-members of a pioneer California dancing group.

LAYING THE FIRST RAIL—a re-enactment—was one of the many features of the celebration. Watching with special interest were descendants of Theodore D. Judah, builder of the SV and pioneer crusader for a transcontinental railroad, whose efforts brought organization of the Central Pacific, pioneer parent of today's SP. Centennial for SP lines in Texas & Louisiana was celebrated in 1952. While the Sacramento celebration was a one-day affair, the SP may link its major centennial celebration to the 1869 completion of the first transcontinental line.

the same kind of diversion in the westbound morning rush period.

Under present operating conditions, from 10 to 12 expresses which do not stop at Jamaica must be fed through the station on regular eastbound tracks, and sandwiched in between trains which make regular stops. This sometimes results in delays to the expresses and keeps other trains out of the station while they go through. With the new switches, many or all of the eastbound evening expresses will be able to go through on westbound tracks, which are less heavily used at that time of day, without interfering with trains which have scheduled Jamaica stops. The new arrangement will be so flexible that an express may actually be routed through any of the 10 tracks in the station area.

Missouri-Kansas-Texas. — A new air-conditioned passenger station of contemporary design will be built on the site of the present depot at Garland, Tex. The present frame structure will be relocated and used for a freight office and storeroom. In connection with the project the 1,100-ft station platform will be lighted. Completion of the project is expected by mid-November.

Missouri Pacific.—Improvements under way or in preparation at Palestine, Tex., representing a total expenditure of $771,000, include construction of a new passenger station; construction of freight car repair facilities; rehabilitation of diesel locomotive servicing facilities, and a number of concurrent yard changes.

Another large project is under way near Wichita, Kan., at Oatville and Maize, where main track is being raised and, for about three miles, relocated in connection with a local flood control project. Except for right-of-way fence relocation, the relocation is being performed by federal government contractors. At Maize, the raise of track is being handled by company forces, except that grading is by contract. Estimated total cost of the project is $1,041,000.

Elsewhere on the MP system company forces are: Installing a 55,000-bbl fuel oil storage tank at Dupo, Ill. ($66,510); reconstructing a bridge at Renault, Ill. ($42,480); constructing an interchange track with the Missouri-Illinois at Flinton, Ill. ($24,200); replacing a bridge at Witherspoon, Ark. ($68,000); installing a 55,000-bbl fuel storage tank at North Little Rock ($60,000); installing gas-fired steam boilers for heating the depot, passenger cars, etc., at Little Rock ($44,710); rearranging diesel servicing facilities at Bonne Terre, Mo. ($68,600), and raising and replacing a bridge at Leeds.

Additional property for expansion of the East Bottom yard and terminal is being acquired at a cost of about $210,000. This undertaking is about 55% complete. A 2,345-ft siding extension at Utica, Kan., is being handled by company forces, ($20,110) as is a 2,434-ft siding extension at Modoc ($21,900).

On the Gulf Coast Lines and International-Great Northern creosoted wooden trestles at five locations are being replaced with reinforced concrete trestles by the system bridge gang at a combined cost of $361,000.

New York & Long Branch.—Automatic gates, coordinated with the railroad's own speed control and automatic block signal systems, are being installed at seven grade crossings in Belmar, N.J. At two crossings in South Belmar, modern flasher-type signals are being installed in place of older signals. The project, representing an expenditure of over $175,000, is part of the NY&LB's intensive campaign to reduce hazards at the 104 grade crossings on its 38-mile line. (See also picture on page 7.)

Ontario Northland.—New concrete platforms are being built in the North Bay (Ont.) coach yards at a cost of $20,000 by Farquhar Construction, Ltd., of North Bay. G. L. Hamilton, of Kirkland Lake, is installing concrete platforms in the diesel shop at Cochrane. A new asphalt and concrete platform is being built at Porquis station by the Caswell Construction Company, at a cost of $28,000.

Company forces are extending passing tracks at Doherty, Redwater and Bushnell; erecting a 40,000-gal water tank at Temagami; and constructing a toolhouse and motor car building at Swastika and a signal maintenance shop, toolhouse and motor car building at Temagami.

Pennsylvania.—Capacity of this company's new $11-million ore pier at Greenwich Point, Philadelphia, was increased by 50%—to 5,400 tons per hour—when a new electric-powered ore-unloading machine, built by the Dravo Corporation, was placed in operation July 28. The pier itself was described in detail in *Railway Age* March 15, 1954, page 45.

Peoria & Pekin Union.—All terminal facilities will be consolidated at a single location, the Creve Coeur, Ill., yard, at a cost of about $1,250,000.

Work will begin this fall on a new general office building and freighthouse. The office building, of modern design and steel and brick construction, will house offices of president, superintendent, engineering department, mechanical department and joint agent. It will be 70 ft by 112 ft. The freighthouse, of similar construction, will be 50 ft by 400 ft. The two buildings are expected to cost about $882,000.

In the near future the company will add new mechanical facilities and wash and locker rooms for yard and engine crews.

Sacramento Northern.—New diesel facilities are being constructed at West Sacramento, Cal., by company forces at an estimated cost of $24,000. Included are a 21-ft inspection pit; a 20,000-gal fueling station complete with pump and pumphouse; the relocation of two buildings to be used as a trainmen's room and diesel engine supply room; and the construction of some additional trackage.

St. Louis-San Francisco.—A new terminal office building will be constructed at Birmingham, Ala., at a cost of $117,000, by company forces. Light repair tracks and appurtenant facilities at Springfield, Mo., will be renovated by company forces at a cost of $102,000. A steam heating plant at Lindenwood (St. Louis) to replace an automatic heating unit, and a new building to house enginemen's wash and locker rooms there, will be handled by company forces at a cost of $65,000. The Lawton, Okla., passenger station will be remodeled to provide consolidated freight and passenger facilities at a cost of $32,000. Diesel service and yard office facilities at Joplin, Mo., will be relocated at a cost of $27,000.

WANT TO RUN A LOCOMOTIVE?

Desk-bound railroad men who may be harboring a secret desire to run a diesel-electric locomotive need repress themselves only until August 31.

A 2,400-hp passenger locomotive will be theirs to command when the General Motors Powerama opens in Chicago on that date, to continue until September 25. The locomotive, one of seven to be displayed by GM's Electro-Motive Division, will be a "drive-it-yourself" proposition. Specially mounted so its wheels do not touch the rails, it will be open to any and all visitors who may wish to try "cracking the throttle." One of its two 12-cylinder engines will be operating and will actuate the front wheels.

While father and son take over the cab, mother and daughter may watch the unit's major components in action, because its side body panels will be removed.

Among other locomotives on the three-quarter-mile display track will be the new lightweight unit which E-MD will offer for any of the various lightweight trains now under construction, including GM's own, which will be shown for the first time.

Termed "The World's Fair of Power," and celebrating GM's 100-millionth diesel horsepower, the Powerama will be staged outdoors on the lake front adjacent to Soldier Field. It will be open daily from 10 a.m. to 11 p.m. except Sundays and holidays, when it will open at noon. Admission will be free.

Law & Regulation

Tax Relief Bill Vetoed; Later Enactment Likely

President Eisenhower has vetoed—because of a technically defective amendment—a bill (H.R. 6887) extending for another year the provisions of section 108 (b) of the Internal Revenue Code. The bill provides tax relief for railroads adjusting their debt structure as a result of reorganization by excluding from the road's gross income any income from the discharge of indebtedness pursuant to a court order in a bankruptcy or receivership proceeding. The defective amendment, tacked onto this bill in the Senate, dealt with the effects of state and federal taxes on bequests to charity. In a memorandum of disapproval accompanying his veto, the President said that the defects in the bill could be remedied and the bill subsequently enacted retroactively "without any serious difficulty." As it now stands, the tax relief for railroads is due to expire December 31.

House Committee Favors Marketing Facilities Bill

The House Committee on Interstate and Foreign Commerce, before the recent adjournment of Congress, ordered a favorable report on H.R. 4054, described as the "Marketing Facilities Improvement Act."

The proposed bill, which was opposed by the railroads at a hearing on May 20, would aid municipalities and political subdivisions of states and other public agencies in creating and developing "modern and efficient public wholesale markets for the handling of perishable agricultural commodities in areas where such markets are found to be needed," by providing for federal aid in planning and financing such markets. The bill would require such markets to "be so located and designed as to make possible direct loading and unloading of rail and truck receipts," and would forbid any restrictions which would prevent any rail or truck transportation company from gaining access to the markets.

ICC Sets Back Date For Multiple Unit Check

The Interstate Commerce Commission has postponed from September 1 to January 1, 1956, the effective date of the rules it has prescribed for inspection of multiple-unit equipment, i.e., electrically propelled cars operated by a single set of controls (*Railway Age*, June 27, page 10).

Truck, Bus Insurance Requirements Boosted

The Interstate Commerce Commission, finding insurance requirements for truck and bus operators "unrealistically low," has set new minimum levels for insurance coverage.

For truckers and freight forwarders, the commission set these minimum figures: For bodily injury or death to one person, $25,000; for all persons in any one accident, $100,000 subject to the limit of $25,000 per person; and, for property damage, not including truck or cargo, $10,000. The new coverage will be required as of November 1. Existing minimum requirements are, respectively, $10,000, $20,000 and $5,000, but the commission noted that many truckers already are insured in excess of those figures.

For bus companies, the minimum coverage figures set by the ICC are: For one person, $25,000; for all persons where the seating capacity is seven passengers or less, $100,000 subject to the $25,000 limit per person; for all persons, eight to 12 passengers, $150,000; 13 to 20 passengers, $200,000; 21 to 30 passengers, $250,000; and 31 passengers or more, $300,000; and, for property damage, not including the bus, $10,000.

Postal Transportation Organization Realined

The Post Office Department has announced an administrative reorganization of its Postal Transportation Service.

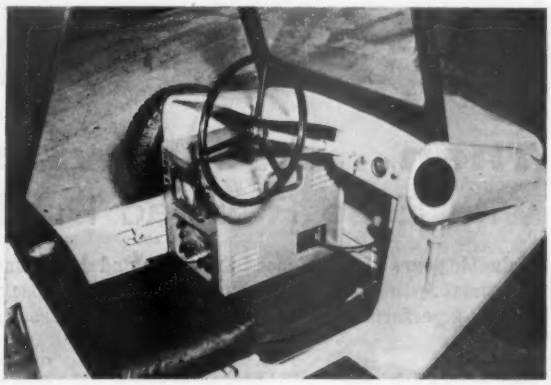
As of August 15, the department announced, the 15 existing PTS divisions were abolished and their functions were consolidated within the framework of the postal regions. PTS General Superintendents are now to be designated as Regional Transportation Managers, responsible to the Regional Directors but with the same jurisdiction in the region as they formerly had in their divisions. Postmaster General Arthur E. Summerfield stated that "better administrative coordination" should result from the realinement.

Labor & Wages

Emergency Board Created In N.Y. Central Dispute

President Eisenhower has named an emergency board to investigate a dispute between the Order of Railway Conductors and Brakemen and the New York Central, Lines East.

Invoking the Railway Labor Act to forestall a threatened strike over operating rules, the President on August 13 created the board and instructed it



TO FACILITATE INSPECTION of freight car axles, without disassembly, the Chesapeake & Ohio is using ultrasonic Reflectoscopes delivered to it by Sperry Rail Service (*Railway Age*, July 25, page 16). The inspection units, mounted, as shown, in small motor cars which travel beside a track alongside a string of freight cars, can examine 320 axle ends a day. Search units of the devices are applied to axle ends and structural discontinuities which may be present in the axle are identified and visually located on a screen.

"Old Maud," the first Mallet-type locomotive built in the United States, was placed in service by B&O in 1904. She had a single huge boiler which powered two sets of drivers turning independently of each other. These permitted her to develop a tractive effort of 71,500 and negotiate mountain curves with heavy payloads.

Then...and now...serviced with Esso Railroad Products

Valuable years of experience in research and development, along with continual testing on the road and in the lab, stand back of the outstanding performance of famous Esso Railroad Products.

Diesel Fuels
ESSO ANDOK Lubricants—versatile greases
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DIOL RD—Diesel lube oil
COBLAX—traction motor gear lube
VARSOL—Stoddard Solvent
SOLVESSO—Aromatic solvent
ESSO Weed Killer
ESSO Hot Box Compound
AROX—pneumatic tool lube
CYLESSO—valve oil
ESSO Journal box compound
Asphalt
Cutting Oils
Rail Joint Compounds
Maintenance of Way Products
Signal Department Products
RUST-BAN — corrosion preventive

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RAILROAD PRODUCTS

SOLD IN: Maine, N. H., Vt., Mass., R. I., Conn., N. Y., N. J., Pa., Del., Md., D. C., Va., W. Va., N. C., S. C., Tenn., Ark., La.

ESSO STANDARD OIL COMPANY — Boston, Mass. — Pelham, N. Y. — Elizabeth, N. J. — Bala-Cynwyd, Pa. — Baltimore, Md. — Richmond, Va. — Charlotte, N. C. — Columbia, S. C. — Memphis, Tenn. — New Orleans, La.

"HERE WE GO AGAIN!" DEP'T.

Notice is being served on major carriers that the Order of Railway Conductors & Brakemen wants:

(1) A $3 daily increase in pay for passenger conductors and brakemen;

(2) A $2 daily increase in pay for freight conductors and brakemen; and

(3) "Adequate daily earning for conductors and brakemen now laboring on minimum assignments."

ORCB President R. O. Hughes explains that the demanded increased differential between freight and passenger service coincides with the 150-mile basic day in passenger service as compared to 100 miles in freight service, and that actually the increase sought is identical on a per-mile basis. He said the graduated rate of pay increase case (*Railway Age*, June 6, page 9, and April 4, page 7) "carried certain wage adjustments but its successful purpose was to correct the train crew's pay base, not to raise wages"; and that the "new movement" is for a "direct pay increase under the Railway Labor Act."

to report to him within 30 days as to recommendations for settlement.

Subsequently named to the board were: Mortimer Stone, former Justice of the Colorado Supreme Court; Dudley E. Whiting, a professional arbitrator of Detroit; and Arthur Stark, executive secretary of the New York State Board of Mediation.

Supply Trade

The **Fred Harvey** organization, 79-year-old dining car, restaurant, hotel and resort firm, has elected **Byron Harvey, Jr.**, as chairman of the board and **Stewart Harvey** and **Daggett Harvey** as vice-chairmen. **Miller Adams**, controller of the firm for the past 25 years, was elected president, succeeding Byron Harvey, Jr. The purpose of the change is to relieve the Harveys of direct management details and permit them to concentrate on proposed expansion plans, research, overall policy and public and employee relations, the new chairman explained.

E. P. Kondra, assistant vice-president, **National Brake Company,** New York, has been appointed vice-president, sales.

Union Carbide & Carbon Corp. has announced plans to erect a modern 41-story building in New York, to house the home offices of the corporation and its divisions and subsidiaries. It has arrived at an agreement to buy an option held by the New York Central, which will enable Union Carbide to purchase the long-term leasehold on the entire block between Park and Madison avenues and 47th and 48th streets.

E. H. Schoonmaker, manager of the St. Louis sales office of **Baldwin-Lima-Hamilton Corporation,** has been appointed eastern district sales manager, at New York. He has been succeeded at St. Louis by **W. A. McKnight** of the Houston office.

American Hoist & Derrick Co. has reentered the crawler and rubber mounted crane market with newly engineered and designed cranes and shovels. It has appointed **Eastern Railway Supplies, Inc.,** New York, and **Stanley H. Smith & Co.,** Cleveland, as railroad sales representatives for this equipment, as well as its line of locomotive cranes.

Allen P. Beckloff, manager of the tubular products and cold finished bar division of **Joseph T. Ryerson & Son, Inc.,** has been appointed manager of the Boston steel service plant, succeeding **Park Sanderson,** retired.

Philip R. Coerper has joined the **Nordberg Manufacturing Company** at Milwaukee, as sales engineer, Power Chief engine department. He will assist engine distributors and will serve the railroad industry throughout the United States and Canada.

E. B. Hill, formerly vice-president and director of sales, **Gar Wood Industries, Inc.,** has been appointed assistant to president of **Koehring Company.**

R. H. Devine, assistant sales manager, Wood Preserving division, **Koppers Company,** Pittsburgh, has been appointed assistant manager, eastern district, at Wilmington, Del., and has been succeeded by **J. W. Sullivan,** manager of the Colorado district.

Mass Transportation Consultants, 11 West 42nd st., New York, has recently been formed to engage in independent signal engineering service to railroads. **Earl M. Allen,** for many years associated with **Union Switch & Signal Division** of **Westinghouse Air Brake Company,** in circuit and project engineering, has been appointed chief project engineer.

The **Harvey D. Welch Lumber Company,** Chicago, has appointed **Robert L. Belt** as sales manager. The company furnishes lumber supplies for railroad car shops. Mr. Belt was formerly vice-president of **Mather Stock Car Company.**

Max Riebenack, III, executive vice-president of **Industrial Brownhoist Corporation,** has been elected president. **Stanley R. See,** director

Max Riebenack III

of sales for the eastern region, has been made vice-president and assistant to president.

W. D. Rothell, sales engineer for **Stratoflex, Inc.,** at Kansas City, Mo., has been named West Coast district manager at Los Angeles, succeeding **A. B. Quinn,** resigned.

Figures of the Week

Freight Car Loadings

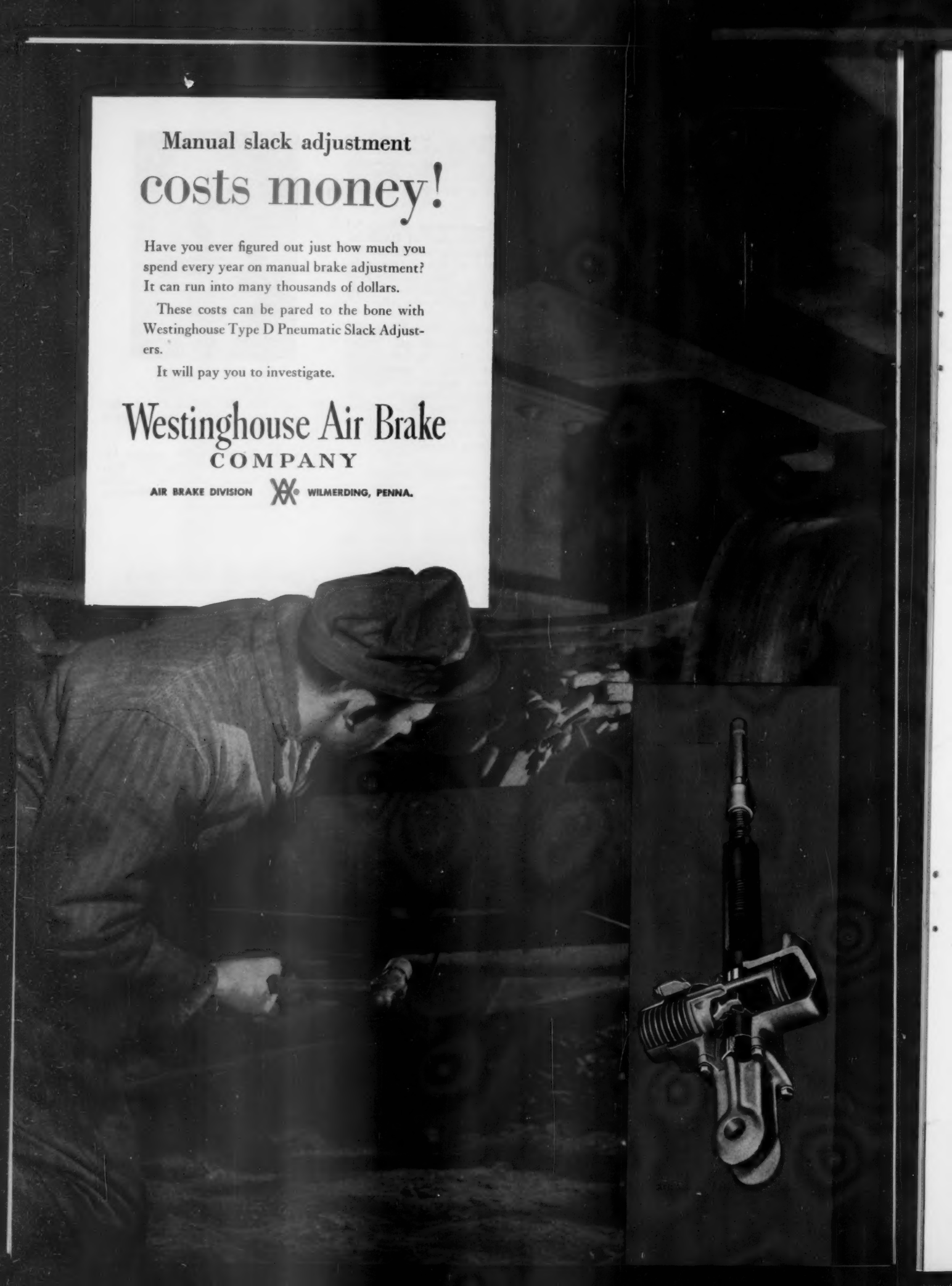
Loadings of revenue freight in the week ended August 13 totaled 775,397 cars, the Association of American Railroads announced on August 18. This was an increase of 9,945 cars, or 1.3%, compared with the previous week; an increase of 90,125 cars or 13.2%, compared with the corresponding week last year; and a decrease of 32,225 cars, or 4%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended August 6 totaled 765,452 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, August 6

District	1955	1954	1953
Eastern	127,061	105,920	132,758
Alleghany	153,202	119,597	157,188
Pocahontas	60,168	46,652	59,437
Southern	117,017	112,527	121,515
Northwestern	128,415	115,967	136,750
Central Western	122,635	113,023	119,501
Southwestern	56,954	53,906	58,200
Total Western Districts	308,004	282,896	314,451
Total All Roads	765,452	667,592	785,349
Commodities:			
Grain and grain products	57,306	52,408	49,210
Livestock	5,789	6,504	6,410
Coal	128,698	105,274	132,682
Coke	13,028	6,772	13,093
Forest Products	46,842	38,277	47,580
Ore	82,003	66,781	91,862
Merchandise l.c.l.	64,890	61,605	68,943
Miscellaneous	366,896	329,971	375,569
August 6	765,452	667,592	785,349
July 30	795,771	683,617	793,754
July 23	786,433	684,281	780,699
July 16	799,040	694,545	791,414
July 9	652,680	569,562	721,454
Cumulative total, 31 weeks	21,798,089	19,801,423	22,906,718


Manual slack adjustment
costs money!
Have you ever figured out just how much you spend every year on manual brake adjustment? It can run into many thousands of dollars.
These costs can be pared to the bone with Westinghouse Type D Pneumatic Slack Adjusters.
It will pay you to investigate.
Westinghouse Air Brake
COMPANY
AIR BRAKE DIVISION
WILMERDING, PENNA.

Financial

Annual reports of 30 additional railroads, for the calendar year 1954, are summarized on page 48.

Boston & Maine.—*D&H Pooling Agreement.*—The ICC has authorized the New Haven to intervene in support of the proposed pooling agreement between the Boston & Maine and the Delaware & Hudson (*Railway Age*, August 1, page 13).

Chesapeake & Ohio.—*Mergers of Subsidiaries.*—This road has asked the ICC to approve merger into the C&O of two subsidiary lines, the Flint Belt and the Manistee & Northeastern, which it now controls as sole owner of outstanding stock as successor to the Pere Marquette. Under terms of the mergers 10,000 shares of $100-par FB capital stock and 8,537 shares of $100-par M&N capital stock would be cancelled.

Chicago Great Western.—*Delaware Incorporation.*—This road has asked the ICC to approve a statutory merger of the Chicago Great Western Railway Company, now incorporated in Illinois, into the newly-formed Chicago Great Western, Inc., incorporated in Delaware. It also asked approval of issuance of 366,104 shares of $50 preferred and 361,454 shares of $50 common stock, which would be exchanged on a share-for-share basis for like amounts of stock now held by shareholders in the Illinois corporation.

Claremont & Concord.—*Reincorporation.*—This road has asked the ICC to authorize issuance of 510 shares of no-par common stock to Samuel M. Pinsly, president, in order to enable the newly-organized road (*Railway Age*, December 27, 1954, page 15) to reincorporate in New Hampshire. The road is now incorporated in Delaware and Mr. Pinsly holds 500 shares of common stock in that corporation. This stock would be exchanged for 500 shares of the proposed issue. The other 10 shares would be issued to Mr. Pinsly to comply with New Hampshire requirements pending completion of the merger of the Delaware corporation into the New Hampshire corporation.

They would be reacquired by the road when the proceeding is completed.

Delaware & Bound Brook.—*Merger of East Trenton.*—The ICC has authorized the merger of the ET into the D&BB, with the ET's 600 shares of $100-par capital stock to be cancelled.

Missouri-Kansas-Texas.—*Recapitalization Plan.*—The ICC has approved the application of this road to withdraw its plan to modify its capital structure under the Mahaffie Act (*Railway Age*, July 25, page 16).

Sumpter Valley.—*Acquisition by Hines Lumber Company.*—The ICC has approved acquisition of the SV by the Hines Lumber Company, of Hines, Ore., through purchase by the latter of the Oregon Lumber Company, which owns all the road's outstanding capital stock.

Securities

Ludington & Northern.—*Stock Dividend.*—This road has asked the ICC to authorize issuance of 4,200 shares of $25-par capital stock as a dividend to holders of its 600 shares of capital stock now outstanding. The dividend, made on a seven-to-one basis, is being offered, the road explained, to balance its capital structure. It reported a $126,022 surplus as of December 31, 1954.

Security Price Averages

	Aug. 16	Prev. Week	Last Year
Average price of 20 representative railway stocks	92.80	91.75	71.86
Average price of 20 representative railway bonds	98.70	98.83	97.02

Dividends Declared

ALABAMA & VICKSBURG.—$3, semiannual, payable October 1 to holders of record September 6.

DELAWARE & BOUND BROOK.—50¢, quarterly, paid August 20 to holders of record August 13.

ERIE & KALAMAZOO.—$1.75, paid August 15 to holders of record July 29.

KALAMAZOO, ALLEGAN & GRAND RAPIDS.—$2.95, semiannual, payable October 1 to holders of record September 15.

PITTSBURGH, FORT WAYNE & CHICAGO.—common, $1.75, quarterly, payable October 3 to holders of record September 9; 7% preferred, $1.75, quarterly, payable October 4 to holders of record September 9.

VICKSBURG, SHREVEPORT & PACIFIC.—common, $2.50, semiannual; 5% preferred, $2.50, semiannual; both payable October 1 to holders of record September 6.

VIRGINIAN.—common, 62½¢, quarterly, payable September 15 to holders of record September 1; 6% preferred, 37½¢, quarterly, payable November 1, 1955, and February 1, May 1, and August 1, 1956, to holders of record October 19, 1955, and January 16, April 16, and July 16, 1956.

Authorizations

CHESAPEAKE & OHIO.—To assume liability for $3,600,000 of equipment trust certificates, the first of two issues totaling $8,400,000 which will finance in part the acquisition of 938 box cars at an estimated total cost of $10,537,877 (*Railway Age*, July 11, page 58). The certificates, dated August 1, will mature in 15 annual installments of $240,000 each, beginning August 1, 1956. Division 4 approved their sale for 99.134 with an interest rate of 3%—the bid of Halsey, Stuart & Co. and 5 associates which will make the annual cost of the proceeds to the road approximately 3.16%. The certificates were reoffered to the public at prices yielding from 2.7 to 3.1%, according to maturity.

RAILWAY EXPRESS AGENCY.—To issue $4,000,000 of promissory notes as part of an arrangement to finance purchase of 200 express refrigerator cars from General American Transportation Corporation at an estimated unit cost of $19,326. Funds to pay for the equipment were obtained through Salomon Bros. & Hutzler on the following basis: 85% of the purchase price at 2⅝% interest, payable in 20 quarterly installments of $164,262 each; the balance at 2⅞% interest, payable in 73 quarterly installments of $7,942 each; the payments to begin three months after delivery date. A fee of one-fourth of 1% is to be paid Salomon Bros. & Hutzler. The notes will be in further evidence, but not payment of, a conditional sales agreement excuted by REA with General American and assigned by them to the Salomon Bros. group.

Applications

MISSOURI PACIFIC.—To assume liability for $3,675,000 of equipment trust certificates to finance in part purchase of 250 50-ton all-steel "damage free" box cars at an estimated unit cost of $9,358 and 300 50-ton all-steel box cars at an estimated unit cost of $7,620. The box cars would be built at the road's De Soto shops at a total estimated cost of $4,625,572. The securities, to be dated September 1, would mature in 15 annual installments of $245,000 each, beginning September 1, 1956. They would be sold at competitive bidding, with interest rates to be determined by such bidding.

NEW YORK CENTRAL.—To assume liability for $7,500,000 of equipment trust certificates to finance in part purchase of the following diesel-electric locomotives at an estimated total cost of $9,601,637:

	Description and Builder	Estimated Unit Cost
24	1,750-hp road-switchers (Electro-Motive Division, General Motors Corporation)	$169,844
21	1,750-hp road-switchers (Electro-Motive)	183,285
10	900-hp switchers (Electro-Motive)	103,549
2	900-hp switchers (Electro-Motive)	101,437
4	900-hp switchers (Electro-Motive)	109,508

The certificates, to be dated September 15, would mature in 15 annual installments of $500,000 each, beginning September 15, 1956. They would be sold by competitive bidding, with interest rates to be determined by such bidding.

THIS NEW INSIGNIA has been adopted by the Akron, Canton & Youngstown to identify more clearly its area of operation. For the same reason, its slogan also has been slightly changed, to "Ohio's Road of Service." The new insignia replaces the road's former herald, which had the initials "ACY" monogrammed in the center of a circle around which was the old slogan, "The Road of Service."

Railway Officers

ATLANTIC COAST LINE.—J. T. Clark has been appointed district freight and passenger agent at Lakeland, Fla.

BALTIMORE & OHIO.—Earl E. Mountcastle, division freight agent at Pittsburgh, has been named assistant general freight agent there, succeeding **R. R. Williams,** retired after 45 years of service. **M. F. Robinson, Jr.,** district freight agent at Wilmington, Del., has succeeded Mr. Mountcastle.

BANGOR & AROOSTOOK.—Harold C. Duffy, trainmaster at Houlton, Me., has been appointed assistant superintendent transportation at that point, succeeding **B. W. Smith,** superintendent, Northern division, who retired July 31.

BURLINGTON.—J. T. Baldwin, former assistant general freight agent, has been named general freight agent, (divisions) at Chicago. **L. J. Gilmore,** former chief of tariff bureau, and **J. C. Jensen,** assistant general freight agent for the **Colorado & Southern** at Denver, have been named assistant general freight agents at Chicago. **W. E. Alexander** has been named chief of the tariff bureau at Chicago, succeeding Mr. Gilmore.

CANADIAN NATIONAL.—Lawrence B. Freeman, freight traffic manager, sales, for U. S. lines of the CNR, including the Grand Trunk Western, the Duluth, Winnipeg & Pacific, the Central Vermont and CNR

Lawrence B. Freeman

Lines in New England, has been appointed general freight traffic manager for those lines at Chicago.

John Noel, manager of the press bureau at Montreal, has been appointed public relations representative for the Central region, at Toronto. **Jack Thornton,** assistant to director of public relations at Montreal, has been appointed to succeed Mr. Noel, effective September 1.

CANADIAN PACIFIC.—J. D. Thomson has been appointed chief of division bureau at Montreal, with jurisdiction over divisions, Eastern region, succeeding **W. Miller,** promoted.

D. F. Crawford has been named supervisor of transportation of the Manitoba district, at Winnipeg. He succeeds **J. F. Langford,** who has retired.

CANTON.—Effective September 1, **H. J. Watt** will become president to succeed **D. A. Lindley,** resigned.

CAROLINA & NORTHWESTERN.—Spencer M. Percival, assistant vice-president, maintenance-engineering, has been appointed vice-president, with headquarters remaining at Charlotte, N.C. Mr. Percival succeeds **M. Hurt Ramsey,** who retired August 1 after more than 46 years of service.

CENTRAL OF GEORGIA.—H. Gray Carter, chief engineer, has been granted leave of absence because of ill health. **J. Bryan McKerley,** assistant chief engineer, has been appointed acting chief engineer. **W. E. Chapman,** engineer maintenance of way, has been promoted to superintendent of maintenance, in charge of tracks, bridges and buildings; and **W. S. Ray,** engineer of bridges, has become general superintendent bridges and buildings.

CHESAPEAKE & OHIO.—R. Snell, transportation assistant, at Richmond, now has jurisdiction over matters pertaining to the Northern, as well as to the Southern, region.

W. E. Turner has been appointed assistant to vice-president—traffic, at Cleveland. Mr. Turner was formerly special representative in the traffic department at Washington, D.C.

Forrest Jackson, division freight agent at Richmond, has been appointed industrial commissioner at Huntington, W. Va. He has been succeeded by **E. A. Woolen,** general agent at Richmond, who in turn has been succeeded by **H. W. Blank. James H. Suthann,** general agent at Milwaukee, has been appointed division freight agent at Grand Rapids, Mich.

D. F. Hanley, assistant trainmaster at Rainelle, W. Va., has been made trainmaster there. He acts also as trainmaster of the Nicholas, Fayette & Greenbrier, operated jointly by the C&O and New York Central. **H. H. Buster** has been named road foreman of engines—assistant trainmaster at Rainelle.

John L. Southard, assistant engineer at Detroit, has been appointed assistant office engineer there, succeeding **Douglas C. Alexander,** retired after 48 years of service.

CHICAGO & EASTERN ILLINOIS.—John Mueller, assistant general passenger agent at Milwaukee, retired August 1 after 32 years of service.

B. J. Huff, master car builder at

R. LAYMON MAYS, whose appointment as assistant chief engineer of the Nickel Plate, at Cleveland, was reported in *Railway Age* August 15, page 54.

Danville, Ill., has retired and has been succeeded by **D. L. Cronkhite,** former assistant master car builder. **H. H. Farthing,** former general car foreman at Yard Center, Ill., succeeds Mr. Cronkhite.

EASTERN RAILROAD PRESIDENTS CONFERENCE.—J. Carroll Bateman, assistant chairman, has resigned to become director of public relations, Milk Industry Foundation, Washington, D.C. The position of assistant chairman of the ERPC has been abolished.

ELGIN, JOLIET & EASTERN.—Robert J. Schiek, acting editor of the company magazine, the J-Milepost, has been promoted to editor, with headquarters at Joliet.

LOUISVILLE & NASHVILLE.—George C. Howard, director of personnel, has been appointed to the newly created post of assistant to president at Louisville, Ky. **Wilbur S. Scholl,** assistant director of personnel, succeeds Mr. Howard as director of personnel.

MAINE CENTRAL.—Willard E. Pierce, superintendent of operations at Portland, Me., has been promoted to assistant general manager at that point. **Henry H. Livingston, Jr.,** assistant superintendent of the Fitchburg division of the **Boston & Maine** at Greenfield, Mass., resigned from that post to become superintendent of operations of the MC at Portland. **John J. Lyden,** assistant superintendent at Bangor, has been named assistant superintendent of operations at Portland. **John T. Robertson,** trainmaster at Waterville, succeeds Mr. Lyden as assistant superintendent at Bangor. **Ansel N. Tupper,** assistant trainmaster at Portland, has been promoted to trainmaster at Waterville.

MILWAUKEE.—Sam C. Pulford, yardmaster at the Western Avenue

(Continued on page 48)

For Maximum Revenue and Greater Availability!

Pulpwood Cars For the Progressive FRISCO Feature Cast Steel Underframes and Ends

The St. Louis-San Francisco Railway and ten other progressive railroads of America have built several thousands of pulpwood cars with COMMONWEALTH Cast Steel One-Piece Underframes and Upright Ends.

This design pulpwood car has many advantages over converted or other designs of cars. It provides maximum strength at minimum weight, assures longer life, greater availability and maintenance-free service. The one-piece cast steel underframe and upright ends simplify car construction.

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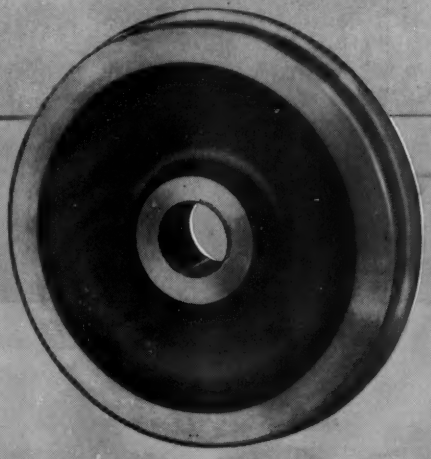

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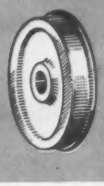

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for smooth hauls... at high speeds...
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Keep your eye on a current example of railroad foresight
. . . the Pennsylvania Railroad in cooperation with the Rail-Trailer Company
has inaugurated the new TrucTrain service running daily from New York to Chicago.
It's the first long-distance service of its kind.

Two new, fast trains have just been put into service,
each train with a capacity of 100 loaded trailers. Brand-new, specially built
75-foot flat cars are in the consist, carrying two trailers per day.
Service between points: 29 hours flat!

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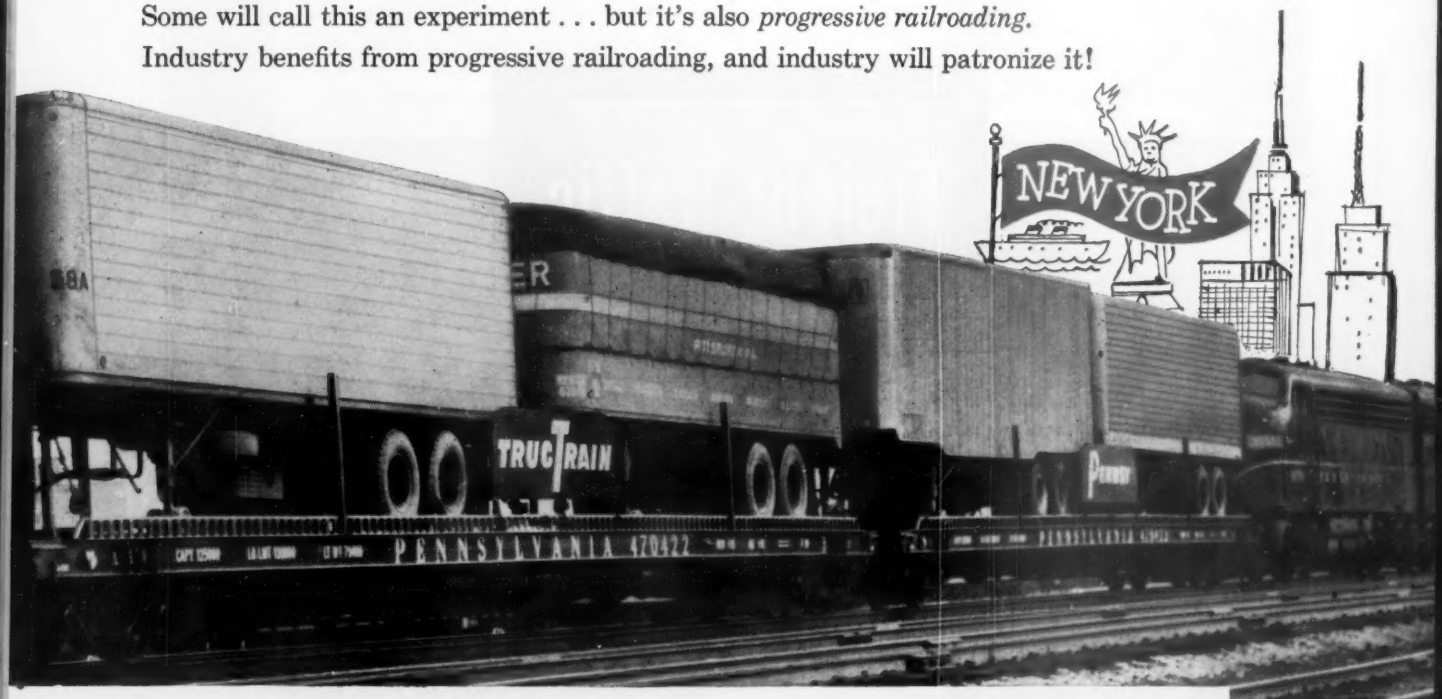
Industry benefits from progressive railroading, and industry will patronize it!



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RAILWAY
Freight Traffic

In October, the AAR will again feature its very successful annual Careful Car Handling Campaign.

In cooperation with this campaign, the October issue of *Railway Freight Traffic* will keynote as its main editorial theme, a comprehensive round-up report showing how individual railroads are tying-in with this careful car handling effort of the Freight Loss and Damage Prevention Section of the AAR.

Another outstanding feature in October will be *Railway Freight Traffic's* exclusive "Annual Directory of Railway Freight Stations Equipped to Handle Unit Loads."

Each year this Directory contains full state-by-state listings of individual roads with a progress report of the latest developments.

Here is an outstanding opportunity to reach 6,800 leading U. S. and Canadian shippers who are vitally interested in current railway freight developments. The October issue will give railroads who advertise an effective background for presenting the advantages and opportunities of their railway freight service. It offers an ideal opportunity, too, to feature freight car, freight handling and packaging equipment.

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WESTERN MARYLAND RAILWAY

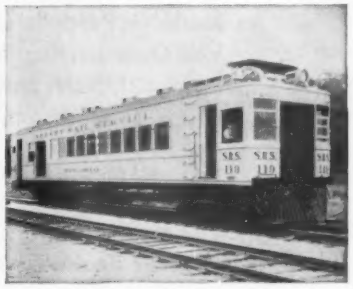
finds SPERRY RAIL SERVICE helps keep track structure sound

"We nip potential hazards in the bud by regularly testing our rail for defects with Sperry Rail Service," says Mr. F. L. Etchison, Chief Engineer, Western Maryland Railway Company. "These tests help us to keep our track structure sound. They also build employee and customer confidence by this indication of our desire for only the best rail in our track."

"Western Maryland was chartered in 1852 as the Baltimore, Carroll and Frederick Railroad," states Mr. Etchison. "Through mergers and reorganizations, WM today is the outgrowth of more than 30 railroads, several of which played memorable roles in great moments of American history. WM is proud of its history and prouder still of its present-day reputation for efficient service, and we are constantly striving to uphold this reputation. For example: to protect WM track, such as this stretch west of Hagerstown, from service failures, we have employed Sperry Rail Service continuously since 1934, first annually, and now for many years each Spring and Fall."

"Locating and marking rail defects hidden from visual inspection is the most valuable aspect of Sperry testing," Mr. Etchison adds. "A segment of track may look good and ride well, yet when Sperry reports a defect, we quickly relegate that rail to a yard or track restricted to light tonnage and low speed. Likewise, if we are re-laying a segment of track and the released rail has a good record under Sperry test, we feel confident that it can be safely placed in any track carrying our principal traffic."

"Our completely dieselized Fast Freights, such as the one above leaving Baltimore with a tonnage train for the Middle West, give dependable, on-time service day in and day out," Mr. Etchison continues. "With sound track we can meet our fast freight schedules without fear of disrupted service. And Sperry's efforts have materially assisted in our performance, for our records show that in each Sperry test, a big majority of defects found are in the very small size group."



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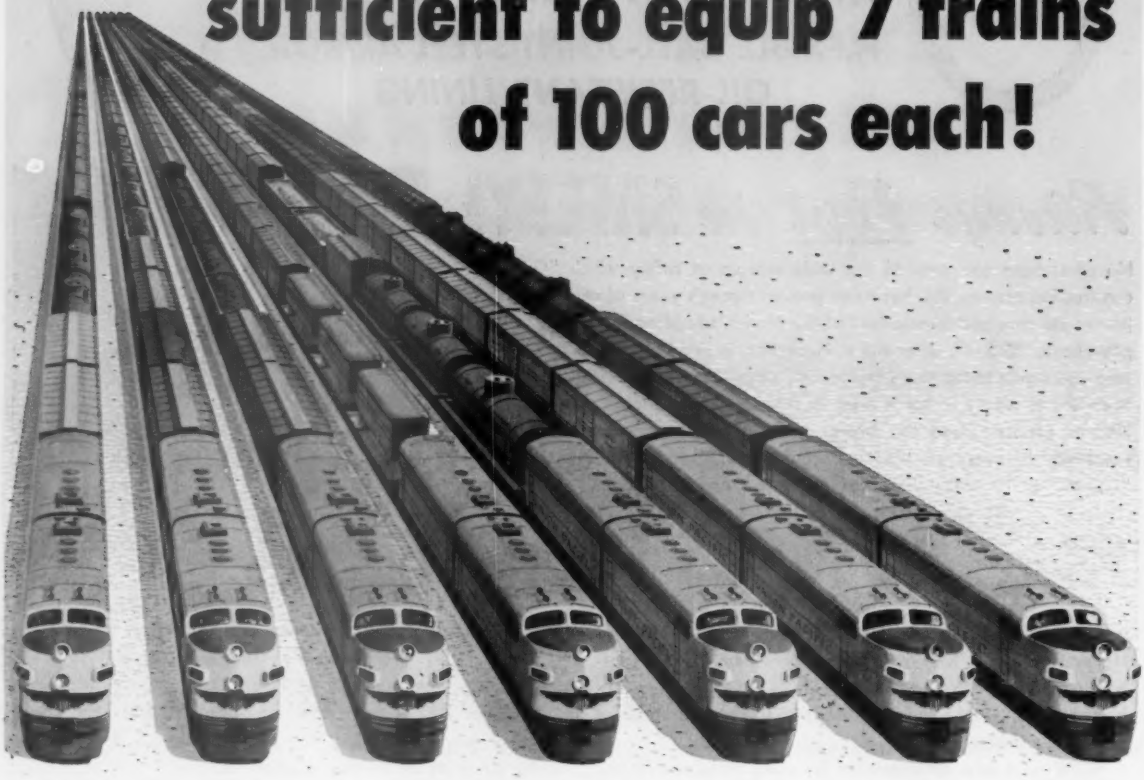

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- **PRACTICALLY ELIMINATES BRASS END WEAR**
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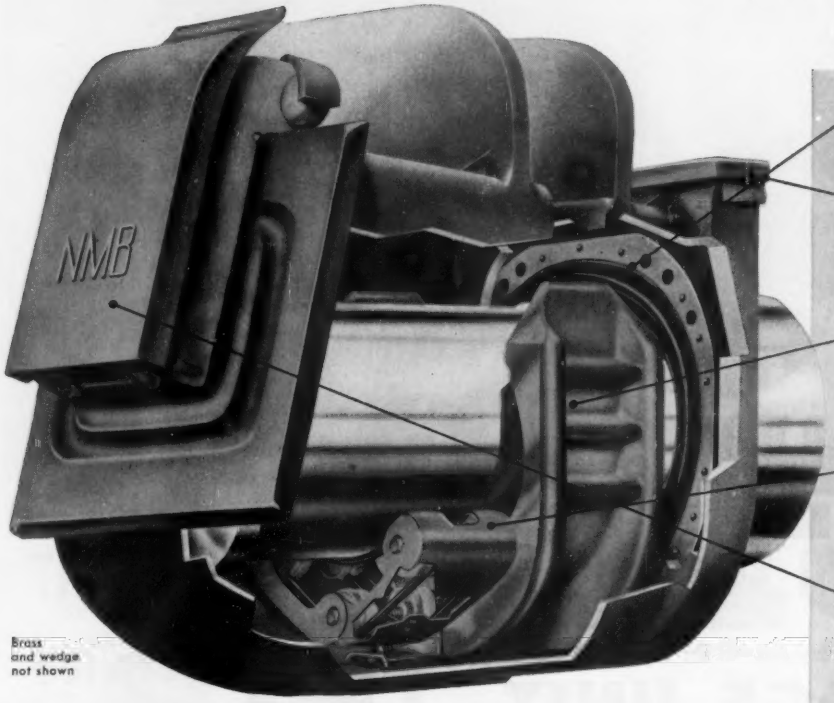
Equip 10 solid bearing cars with the NMB System. Net costs vary, according to journal size, from $232. to $267. per car. Operate under all possible conditions. Bearing end wear will be cut to an unbelievable 0.0006″ per 1,000 car miles. Inspection will be needed only once a month. Oil consumption will drop to about 1 oz. per 1,000 journal box miles. Hot boxes will be virtually eliminated!

These predictions are based on actual experience in over 9,000,000 journal box miles of operation by major Class I railroads. This same experience shows cost of the NMB System can be completely amortized in 18 months, and thereafter savings of $6.88 per 1,000 car miles are attainable.

NMB Lubricating System uses "long" solid bearings; is quickly installed without journal box alteration

A.A.R. APPROVED FOR INTERCHANGE SERVICE ON 10,000 CARS



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A. OIL SEAL. Keeps oil in; dirt, water, brine and snow out.

B. DUST GUARD WELL COVER and FILTER. Exclude dripping water, snow, brine; yet permit breathing.

C. JOURNAL GUARD BEARINGS. Eliminate axle damage during humping, coupling, starting or heavy braking.

D. OIL CIRCULATOR. Lubricates bearings with ½ turn of axle. Guarantees continuous lubrication. Bearings run 50° cooler.

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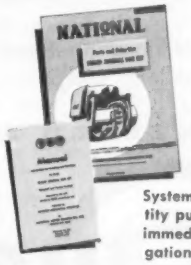
The NMB Sealed Journal Box Lubricating System† is the result of applying modern automotive engineering principles to a century-old railroad problem. Developed by NMB in collaboration with 3 major western railroads, the NMB System provides modern, sealed oil bath lubrication and exclusion of foreign matter from solid bearing journal boxes.

Installation is made in the standard A.A.R. journal box. No alteration is required. Waste packing formerly used for lubrication is eliminated (no waste grabs). NMB Systems for 5" x 9", 5½" x 10" and 6" x 11" A.A.R. standard solid bearing journal boxes can be shipped promptly.

* Based on operating experience of major Class I railroads
† "Patented" and "Patents Pending"



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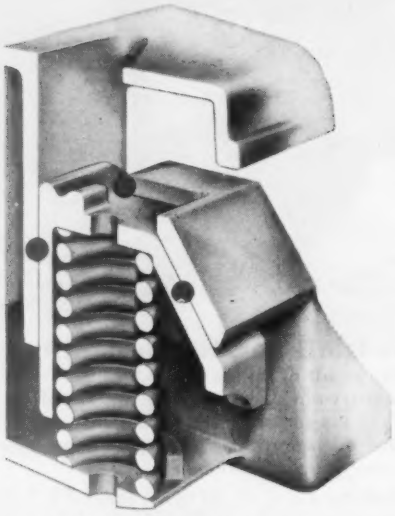

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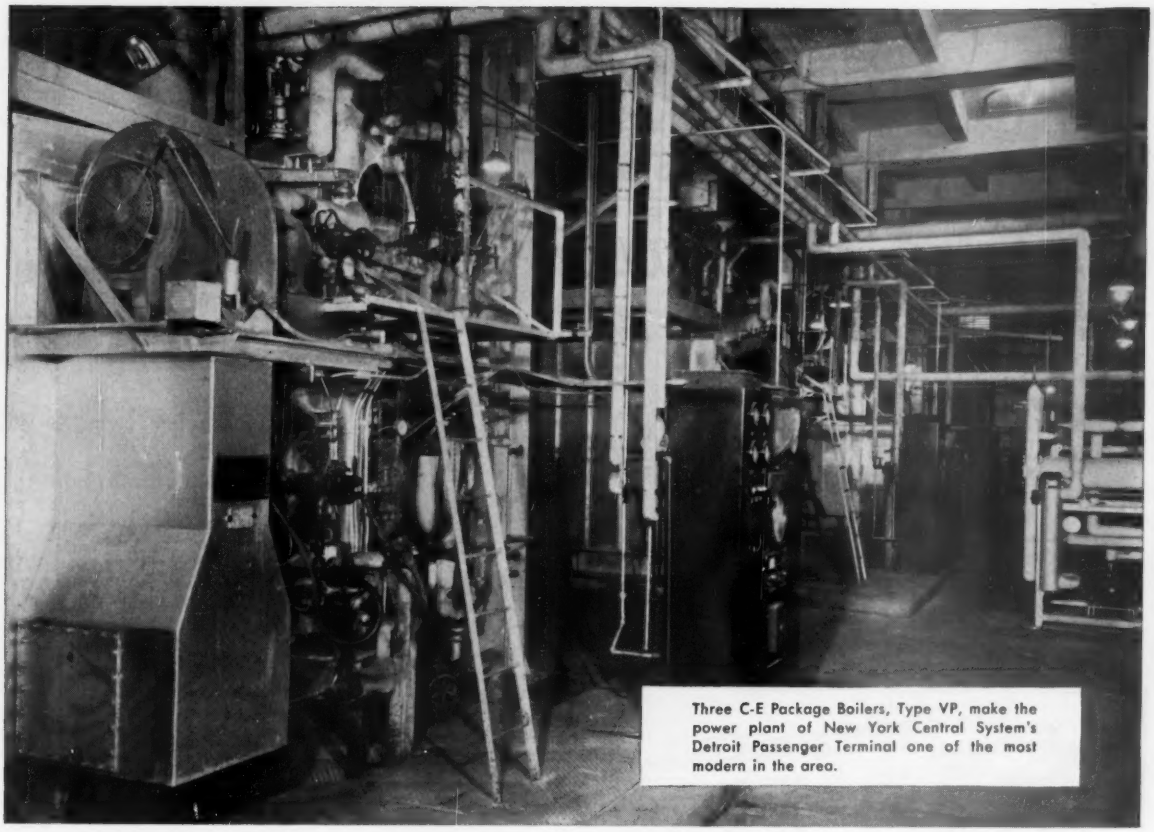

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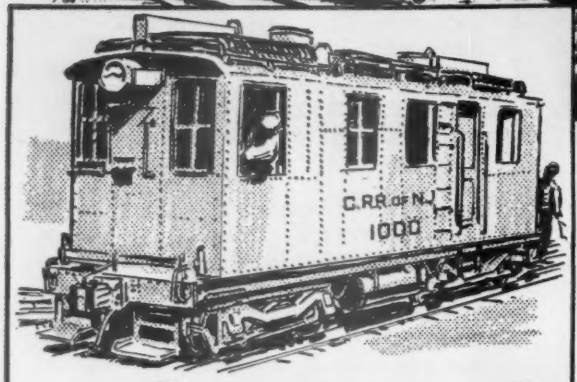

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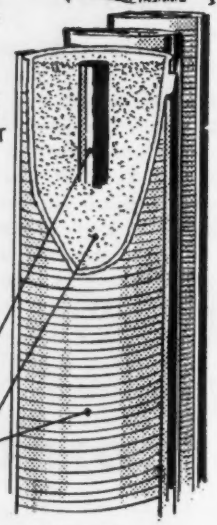

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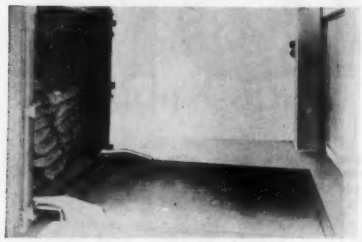
Exide INDUSTRIAL DIVISION, The Electric Storage Battery Company, Philadelphia 2, Pa.

What's New in Products



Adjustable Loading Ramp

An hydraulically operated, 20,000-lb capacity, adjustable loading dock, designated as Model No. 4 A.F., is now being manufactured.

Incorporated into the unit is an automatic safety device and self-leveling action to compensate for varying heights of freight carrier beds plus carrier spring deflection during freight transfer. The safety feature will hold the dock in its last position should the carrier leave accidentally, thus avoiding injury to personnel and damage to equipment.

Operating technique is simple. The hinged platform deck is raised by an instant-acting push button control to clear the floor of the incoming carrier. When the carrier is positioned, the deck is lowered until the layover arms and the two-sectioned, hinged bridge plates rest on the carrier bed. Upon contacting the carrier deck, the safety mechanism and self-leveling action automatically go into operation and are sustained during the freight transfer. After the transfer is completed and the carrier clears the dock, the deck is positioned flush with the dock to permit normal cross traffic. The unit is available with stationary or retractable arms.

The deck is constructed of $\frac{3}{8}$-in. non-skid floor plate carried on a framework of rigidly welded structural forms and shapes, and has heavy cross bracing welded to the underside of the framework. Side toe plates are provided to prevent a gap between dock and deck. Standard width is 6 ft with lengths of 5 ft, 6 ft, 7 ft 6 in., and 10 ft. *Rowe Methods, Inc., 2534 Detroit ave., Cleveland 13, Ohio* •

Cargo Cover

Herculite, a nylon plastic fabric, is claimed to be very strong and light in weight—properties desirable in a cover for material shipped in open-top cars. It reportedly will not mold or rot, can be wiped clean, and stored wet.

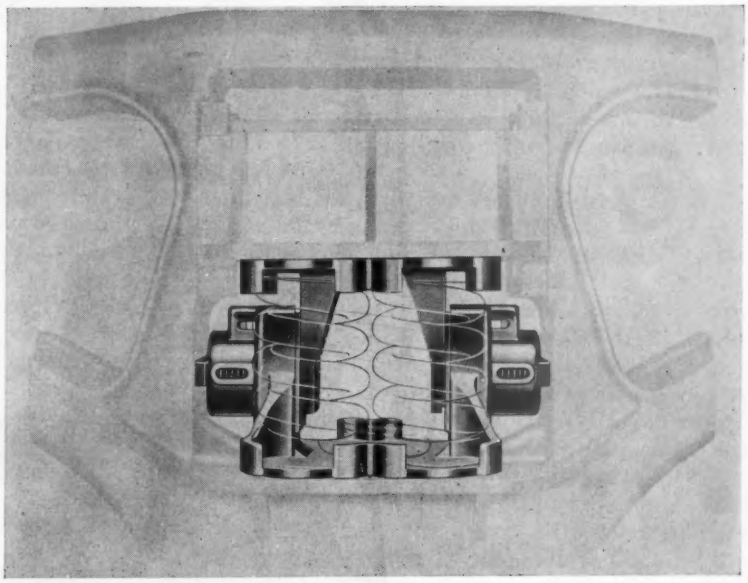
During manufacture the material can be produced in any color. When folded it occupies little space and is easily stored and shipped. Herculite is said to have good abrasion resistance, and a kit is available for patching any rips.

The material will not support combustion and has Underwriters approval. It has also been suggested as a material for passenger car diaphragms and window curtains. *Fellowcraft Engineering Inc., 270 Jelliff ave., Newark 8, N.J.* •

Dock-Type Car Icer

A new dock-type car icer, designed for fast icing of refrigerator cars, is announced by Link-Belt Company. According to the manufacturer, the new icer is completely automatic and can be operated by one man. It is designated as "Model 55." The icer can deliver three sizes of ice—chunk, coarse or crushed—and will process up to 40 cakes of ice per minute. The machine is track mounted, self-propelled and can be adapted to existing railway docks.

It consists of a pick-up conveyor, a crusher unit, a reversible cross conveyor and two pivoted discharge chutes. Operating controls are grouped in an elevated control station. *Link-Belt Company, Chicago* •



Stabilizer Package

A ride stabilizer package that has no wedges or wedge action and bears against the vertical surfaces of the bolster spring opening below the column guides can be applied to double-truss side frame trucks either with or without spring planks. It is said that because there is no wedge action, this device is smooth acting at all times and that the danger of sticking is eliminated.

There is space to use five standard AAR spring groups in the side frame because of the design of this package. It also is said to prevent longitudinal shifting of the device. The top control portion of the package does not nest into the bottom control portion and this is intended to prevent failures caused by heavy lateral shock or lateral roll. There is three-way control of bolster movement and the unit is said to maintain the "squareness" of the truck.

To install, the package is positioned in the side frame after the bolster has been inserted and raised. Compression wedges are inserted at both sides between the bottom control members and the column faces and are driven "home." The bolster is then lowered and positioned on the package. This ride stabilizer is available as a complete unit, or the component parts can be supplied. *Holland Company, 332 S. Michigan ave., Chicago* •

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Effort Grows to Discredit Cabinet Report

The guardians of the public welfare—leaders in education, religion, and responsible journalism and industry—should have their attention directed to the job of sabotage which is getting under way against the Cabinet Committee report on transportation.

A great deal more is at stake here than the defense of the public interest in efficient transportation. Also at issue is the vastly more important question—*whether or not a popularly governed country like ours can insure its progress and survival by making intelligent decisions on complex questions of national economic policy.* In his recent great book, "The Public Philosophy," Walter Lippmann observes that the popular democracies "are like men who have kept their appetites but have forgotten how to grow food." That is, their continued welfare requires that realistic and intelligent decisions be made on important and complex national issues—but they have not yet learned that such decisions cannot be made by leaving them to the mercy of pressure groups.

Mr. Lippmann further points out that freedom of speech has tended to become "the unrestricted right to exploit the ignorance, and to incite the passions, of the people." If this is what freedom of speech is—"a hullabaloo of sophistry, propaganda, special pleading, lobbying, and salesmanship"—then it is a right which isn't likely to endure indefinitely.

The handling this transportation policy issue gets is not a question of ethics only, but involves also the practical problem of national progress, and survival. In the part of the world ruled by dictators, complex decisions concerning technology and economics are made by experts, and are not submitted to popular referendum, with the outcome left to the action of pressure group politics and press agentry. There is, for instance, no likelihood whatever that Russia is going to make vital decisions affecting national efficiency in production and defense on any basis other than that of intelligent analysis of the facts, by people competent at such analysis. In this country, on the other hand, such decisions—all too often—depend, not on competent weighing of the facts, but on the selfish predilections of this or that team of ballyhoo artists.

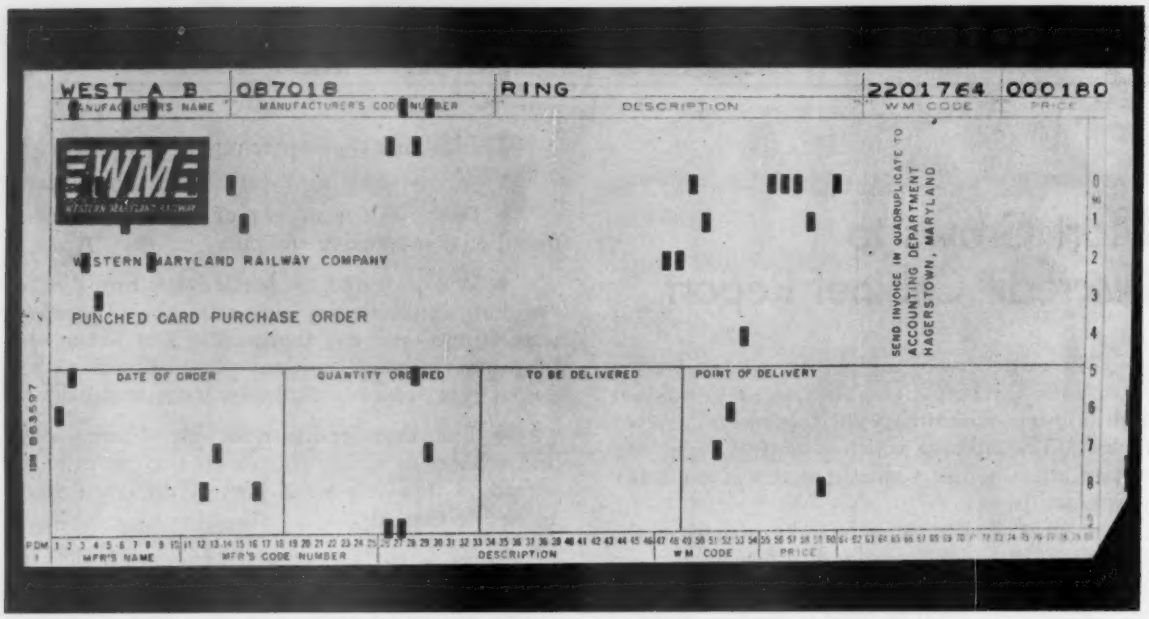
The Cabinet Committee report on transportation—

- Deals with a subject of vital importance to national productive efficiency.
- Was prepared, in preliminary form, by a "working committee of high minded and competent citizens—and was approved by Cabinet members, none of them with any selfish interest to be served by the report's affirmative recommendations.
- Embraces detailed questions of technology and economics which are within the competence of only a relatively small part of the population to decide expertly.

If the fate of this report is going to be left to special interests to decide—in accordance with their respective skills in manipulating public opinion—then God help America! If decisions are going to be made in this frivolous manner on an issue which may well effect national efficiency in so important a matter as transportation by 25 or 50 percentage points—then how is the U.S.A. going to hold its own in competition with rival countries which make such decisions in a more rational and realistic manner?

Leaders in journalism, industry, and education—and certainly some sections of the clergy—have a unique opportunity and responsibility for public service in a situation like this. They do not have to master all the complex details of technology and economics which the Cabinet Committee group had to study—to be able to reach a firm conclusion as to who is competent and who is disinterested and dependable in this situation. They ought to be asked to make this simple inquiry and to report to the public what they discover; and to pillory those whom they may find to be endeavoring to discredit the report and its authors. The authors of the report, of course, are not infallible, and their recommendations are certainly not above honest critical discussion by competent people—but they have the right to expect that such criticism be held to the high standards of integrity and competence that they themselves brought to their task.

If, on the other hand, national transportation policy is going to be decided by fellows who can persuade the masses that 2 plus 2 equals 5, then these pressure artisans will know that most other economic and technological questions can also be decided in the same way. If and when that happens, America won't be at the top of the ladder, any more, in productive efficiency. Probably it won't be at the top in military strength either.



PUNCHED CARD purchase order provided to the stores department by accounting, before filling in lower margin.

Why Punch-Card Purchase Orders?

WESTERN MARYLAND FINDS . . .

- Data transcription errors eliminated
- Number of "rush" orders cut
- Inventory reduced
- Clerical work cut

The use of punched-card purchase orders, begun in late 1954, is being extended by the Western Maryland. This in itself speaks well for the advantages of the system. However, the fact is that the punched-card purchase order system has helped to cut inventories, reduce clerical work and simplify both stores and disbursements accounting. Thus it's easy to see why the WM management is enthusiastic about its system.

Under the WM system, punched-card purchase orders are prepared in batches by the accounting department. These cards are machine-duplicated from a basic master card and therefore are free of any key-punch errors. Prepunched, verified and interpreted on each stock-item are the manufacturer's name and his catalog number; description; Western Maryland code number for the part; and unit price. Space is provided on the card also for the order date, quantity being ordered, date wanted, and point to which delivery is to be made. These stock-item cards are sent to the superintendent of stores at Hagerstown, Md., seven order cards at a time for any given item.

The stores department is authorized to purchase items represented by these cards direct from the vendor. These are items on which the purchasing department does not exercise a choice among suppliers.

On the Western Maryland a centralized perpetual inventory record is kept at Hagerstown in the office of the superintendent of stores. When he finds it's time to reorder, the process is simple:

1. Two punched cards for the desired item are pulled from file;

2. Stores clerk takes the order and the purchase history card to the superintendent of stores, who O.K.'s the purchase and changes the reorder point if he considers it necessary;

3. The information on order date, quantity needed, desired delivery date and point is filled in by hand or by rubber stamp;

4. One punched card "copy" is sent to the vendor. The other goes to the receiving point as a prewritten "received" memo. Note that the card does not go to the purchasing department.

Checked on Arrival

When the shipment arrives at the store designated on the order it is checked against the "received" memo on hand. This card copy is noted as to the receipt and then is forwarded to the accounts payable section of the accounting department for matching with the vendor's invoice.

As stated above, seven order cards for any one item

are supplied the superintendent of stores at any one time. Since he uses two cards for each order, once he'd made three orders he would be, effectively, out of cards. Therefore, when his card supply gets down to three cards left in file, the stores superintendent pulls one card from the file and sends it to accounting. Another seven cards for that item are furnished immediately.

Notices of price change are sent direct to accounting by the supplier. Immediately a new master card is cut and a machine-duplicated supply of new cards is made. Cards with the new information are furnished the superintendent of stores at once. Stores people destroy the out-of-date cards.

Many Advantages

At present the WM is buying all diesel parts and air brake material (about 10,000 items) via punched-card purchase orders, or about 60% of its total stock items. The management is convinced that the punched-card purchase order has many obvious advantages to both the railroad and the vendor. Most important of these advantages to the railroad are:

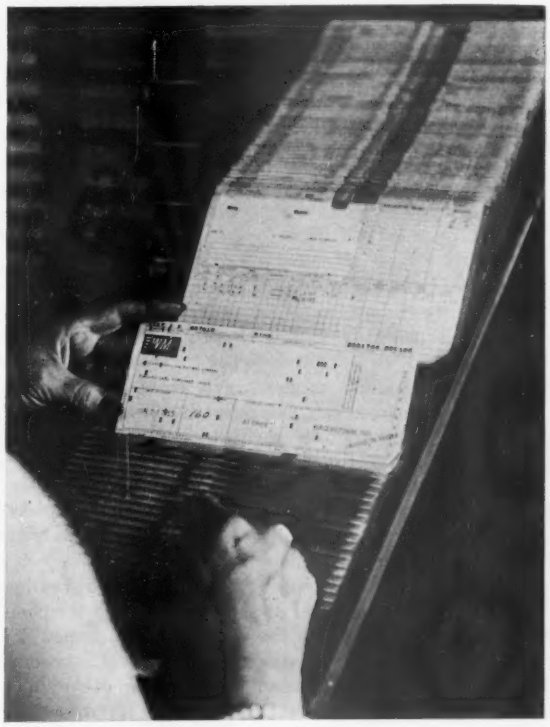
1. Time consumed by the requisition-order process is reduced. Thus inventory can be cut because of this reduction in order "lead time," while rush orders are largely eliminated.
2. Purchasing department can spend its time on competitive buying rather than in rubber stamping orders and requisitions, checking prices, and typing multiple-copy purchase orders.
3. Accounting connected with material ordered in this manner is simplified. Verified correct data on the purchase order prevents many errors which complicate the accounting process. Having the "received" memo makes relatively easy accounting's job of checking invoices.
4. Supplier has more lead time. Consequently he can consolidate shipments to the railroad. This had advantages for both railroad and vender.
5. Since the supply of cards for stores is machine-duplicated from the basic master card there is no possibility of key-punch errors.
6. Since the stores department only *adds* information to the card, errors of transcription of basic data cannot occur.

Suppliers Interested Too

Suppliers are interested in further use by railroads of this system. It can help vendors with their own accounting. Supply people can use the railroad's cards to go right into their own order-invoice systems. Conceivably, if all railroads followed the WM practice the suppliers' paperwork handling costs could be cut. This might bring some further advantages to the railroads.

The WM points out also that the punched-card purchase order could be used to handle emergency ordering. (This might be true especially on larger railroads where the vendor's plant is distant from the order point.) A punched-card from the files could be used to generate a five-channel punched paper tape. The tape then would be used to send a Teletype message to the supplier. The copies written by the Teletype printer at the point of origin of the order would be the preprinted receiving memorandum and other needed internal copies.

NEW SUPPLY of purchase orders for the stores department is made automatically by machine from an original master card. Thus basic data on the purchase orders is error-free.



PURCHASE ORDER has been completed across lower edge. It is compared with the Kardex perpetual inventory record before mailing to vendor.

PROTOTYPE of the production model 50-ft car shows how the new Frigifrater will look. The new model will differ substantially in structural details but will be the same in principle. Both feature cold wall cooling, humidification control, and automatic cooling or heating.

What's Different About EMD Reefer

- Structural insulation
- Body moves on underframe to cushion impacts
- No through metal path to cold compartment
- Induction generator—a brand new electrical development
- Closed circuit for cooling air
- Locomotive-type controls adapted to refrigeration system

The Electro-Motive mechanical refrigerator car differs radically from equipment on the rails today—as a freight car generally and as a refrigerator car specifically.

The "Frigifrater," as the car is named, both heats and cools its load. It has a refrigerating capacity varying from 2 to 9 tons—9 tons when the box is hot and heat transfer is at a maximum; 2 tons when the box is near its minimum temperature setting of 20 below zero. Heaters are incorporated in the evaporator area both for automatic defrosting and to heat the car when the outdoor temperature falls below the desired point.

The automatic switchover from cooling to heating applies only when the car is set to maintain a temperature more than 20 deg above zero. For commodities carried at lower temperatures it is felt no heat is needed. With such low temperature products the colder they are kept, the better.

The cold wall principle of cooling is employed. This principle is attained by blowing all the cooling air through the cavity between the inner and the outer box which together make up the car body. Four blowers in one end of the car force the cooled air along the roof, peeling off down the sides and the far end, then returning underneath the floor to the blowers.

In this manner the heat is counteracted on its way into the car instead of being removed after it has entered. The lading is kept moist and cold because the refrigerated air that goes over the evaporator (and is partially dehumidified there) does not come into contact with the lading.

At the same time the captive refrigerated air surrounding the lading compartment is dry and cold, keeping the car body free from moisture and corrosion. This cuts the need for defrosting to once in seven days (controlled by automatic timer). The only moisture that need be removed is that which may leak in around the gaskets and through the 1¼-in. drain pipe (when it is not frozen).

The air within the revenue compartment is completely sealed off from the cooling air which flows through the roof, walls and floor. There are three roof blowers to

THE BODY can be lifted free of the underframe by engaging four lifting pads.

THE SPACE between the inner and outer box is virtually a continuous duct for blowing the cooling air in its closed path. The air in the revenue space (i.e. that surrounding the lading) is circulated when necessary by three fans.

circulate this air to aid in removing the heat generated by the ripening of fresh produce. These fans are not needed when the car is in frozen food service.

The all metal car body is so constructed that there is no through metal conduction of heat between the inner shell and outer shell. Phenolic thermal blocks at needed points and around bolts and nuts accomplish this. All inside and outside walls of the car body are welded to form a vapor-tight container. The steel corrugated inside wall is lined with replaceable ½-in. plywood panels to furnish a smooth surface.

Double doors provide a full 8-ft opening to the loading compartment. A novel hinge arrangement enables either or both doors to be opened as required. The doors come out about 15⅝-in. and pivot back to minimize the clearance required at loading docks. Fork lift trucks can go in and out of the car without difficulty. Double seals, round corners and glass polyester resin inner panels all reduce heat leakage to a minimum.

The vertical walls are filled with a foamed-in-place material and polysterene batts. The batts are bonded to the outer wall and take up part of the space between the inner and outer box; the poured insulation fills the remainder of the space. The floor and ceiling are insulated with a reflective insulation consisting of sheets of aluminum separated by spacers, which combine the reflective quality of aluminum and the thermal resistance of the dead-air spaces. All of the insulation is moisture proof, non-deteriorating and vermin resistant.

The insulation which is poured in place in the walls and ends comprises two principal ingredients which are pumped through a pipe into the cavity between the inner and outer box. When two ingredients are mixed in a nozzle at the end of a pipe a chemical reaction causes the mixture of the two ingredients to foam.

The resultant foam has a consistency approximating that of rye bread. All voids are filled because it is applied as a liquid. It is rigid against settling and has a density from 1½ to 2 lb per cu ft. (Its density can be made up to 40 lb per cu ft.) At the lower density, insulation value is at an economic maximum and the material still is strong enough so 16-gage steel is suitable for the side sheets which with the insulation form a sort of "sandwich."

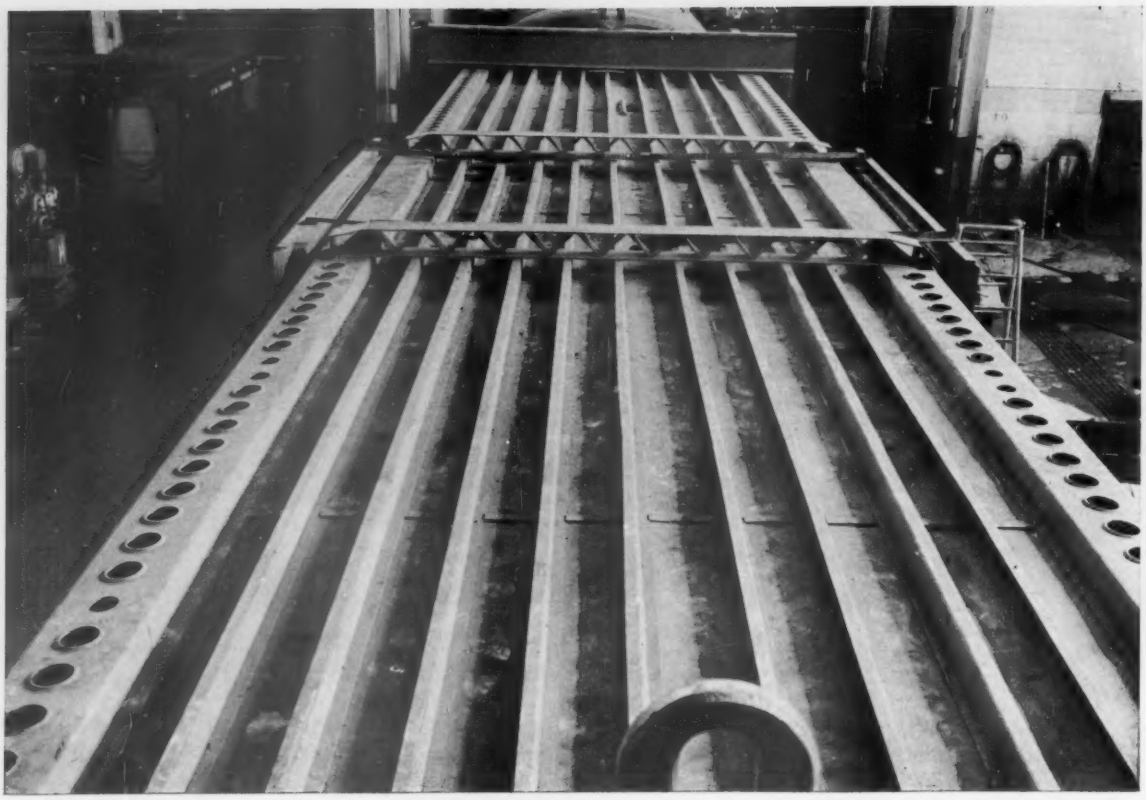
New Type Generator

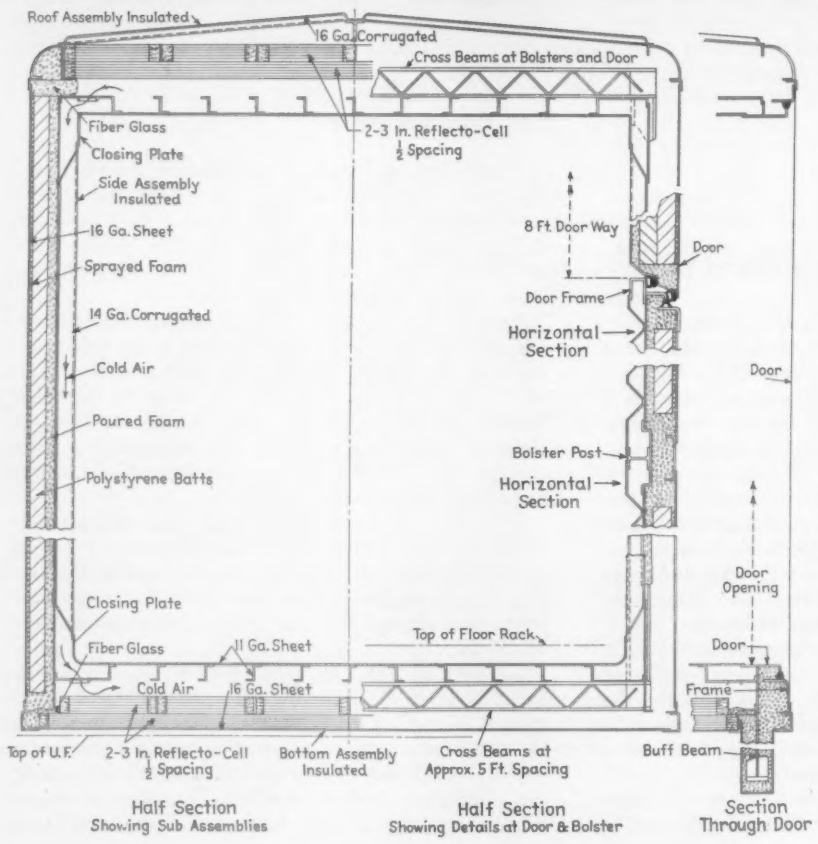
The cooling equipment is the standard Frigidaire refrigeration unit with a couple of modifications. The power plant is driven by a GM Model 2-71 36-hp diesel engine driving a 20-kw alternator. The refrigeration equipment proper consists of dual 5-hp compressor-condenser unit and a matched evaporator.

An induction generator (the reverse of the common squirrel cage induction motor) is used in the refrigerating unit—reportedly the first time an induction generator has been used in any industry. With the induction alternator there are no slip rings, no brushes, no exciter and no voltage regulator. The only wearing parts are the sealed shaft bearings. Correction of the power factor is by a group of capacitors.

Induction motors (which have the same maintenance-reducing features as the induction alternator) are used exclusively—the two 5-hp compressor motors, the two 1-hp blower motors that produce 5,000 cfm to circulate the coolant air, and the three 1/6-hp lading compartment fan motors.

The engine runs at three different speeds. Idling speed is 1,000 rpm, the normal operating speed 1,200 rpm. It is speeded up automatically to 1,400 rpm when the compressor cuts in. The engine normally runs continually, with temperature control attained by cutting the compressor load on and off. For those occasions when the engine is shut down and does have to be





A BLOWER at the refrigerating end of the car sends the cool air between (and to some extent over) the longitudinal Z-sections in the roof structure. In traversing the length of the roof most of the cool air peals off and proceeds down through the holes and between the inner and outer sides of the box; the remainder goes down a duct (3 in. deep by the width of the end) on the far end of the car. It returns to the blower along the entire width of the car underneath the flooring as shown in the section drawing below.

EMD REEFER DESIGNED FOR MINIMUM MAINTENANCE

Two important features of the Frigifrater are shown by this sketch:

1. **The sliding connection between the car body and the underframe.**
2. **The complete absence of a through metal path between the inside and outside of the car for the transmission of heat.**

In the above sketch, the underframe members (side sill and cross bearer) are shown cross hatched —as is the odd-shaped member. The latter is a steel casting about 8 in. long which prevents the body from twisting or skewing on the underframe. It also locks the body to the underframe and prevents separation of the two in the event of a wreck or derailment. A bolt and lockwasher near the bottom lock the casting to the underframe.

The shaded members are wear plates. The horizontal plate is the one on which the body slides relative to the underframe (a 2-in. movement either way from the designed location, or a total of 4 in.).

The solid black pieces are phenolic laminate thermal breakers. They break up what would otherwise be a continuous metal path for heat transfer. The same material is used to form heavy washers for all bolts that extend through to the inside of the car body.

To the top and right of these thermal barriers are two steel plates (shown striped) to which the car body is attached. A short portion of what EMD terms the body cross bearer is shown attached to the two steel plates (which are bolted to the steel casting through the plastic pads).

Thus the body and the steel casting slide longitudinally as a unit on the underframe. At the same time the lower part of the vertical flange by its close clearance on either side to the underframe cross bearer and to the side sill prevents sideways movement between the body and the underframe of the car.

Removing the bolt and lock washer near the bottom of the steel casting breaks the only direct connection between the body and the underframe. The body can then be lifted free by crane (the fuel lines must also be disconnected) and placed on shipboard or any place desired. The cooling unit can be operated with the body separated by supplying either fuel to the diesel engine or 220-volt a-c current to the refrigerating unit.

started, a hydraulic starter is included with both automatic and manual charging features. The latter is merely a hand-operated pump.

Body Slides on Underframe

The car body of the Frigifrater is completely separated from the steel underframe. Fiber supports and cushioning devices permit the car body to slide freely over the underframe, within practical limits, thus protecting the car body, refrigeration equipment and lading from damage from slack action of the train or switching operations.

The underframe is reduced in function to that of a buff and drag structure only. It is essentially a flat car with four pads on which the body rests. Inherent bending action under buff load has been practically eliminated. The underframe has no camber. The buff load goes straight through approximately on the neutral axis, causing a direct compressive force.

As the car body is supported by the underframe at two places at each bolster the weight is transmitted directly through the bolsters to the trucks. It does not go through the side and end sills nor the center sill.

Cushioning of the box and its load against impacts is by two means. First is a conventional rubber draft gear. Second is a body movement of 2 in. in either direction on the underframe. The cushioning medium for this movement is also rubber.

The two major moving parts of the cushioning device are mounted to the body and to the underframe under the center of the doors.

Body Has Two Shells

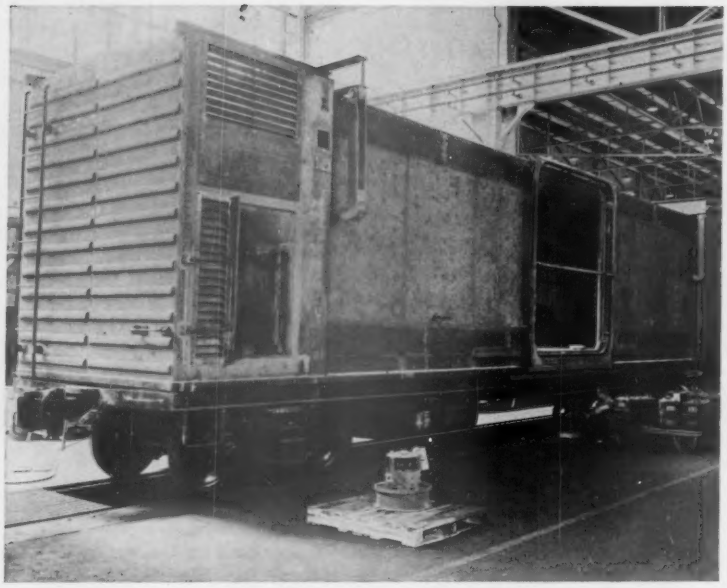
The car body is made entirely of steel except for the replaceable plywood lining on the inner side walls only. It comprises an inner and an outer box with the space between the two containing the insulation and the ducts for the passage of the coolant air.

The inner box is the strength member, the outer is essentially a tent. The main type of insulation used, does, however, cause the "sandwich" made by the insulation and the two walls to contribute to the structural strength

SIGNIFICANT DATA ON THE NEW EMD REEFER

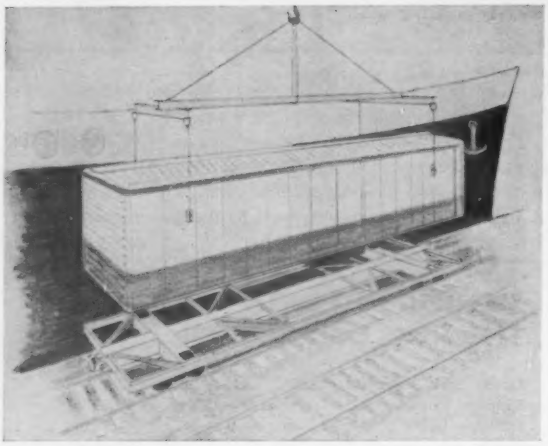
Length over buffer blocks, ft	52
Distance between bolster centers, ft	39
Distance—buffer block to bolster center, ft-in.	6—6
Height over running board, ft-in.	14—11-¾
Top of center sill to top of rail, ft-in.	3—5-7/16
Width:	
Over side sheets, ft-in.	10—1
Over side ladders (max. width), ft-in.	10—7-¾
Over grab irons on doors (max. width), ft-in.	10—7-¾
Over door locks, ft-in.	10—7-⅝
Total inside height, ft-in.	8—10-3/16
Effective inside height (top of floor rack to bottom of fan guard), ft-in.	8—0-13/16
Inside width (inside plywood panels), ft-in.	8—5-11/16
Inside length, ft-in.	44—0-⅞
Total volume, cu ft	3,305
Effective lading volume, cu ft	3,013
Height of door opening, ft-in.	7—11
Width of door openings, ft-in.	8—0
Journal size, in.	6 x 11
Weights:	
Gross weight (fully loaded), lb	210,000
Capacity, lb	127,000 *
Load limit, lb	127,800*
Light weight (dry), lb	82,200 *
Axle loading (max.), lb	52,500
Operating supplies—fuel oil, gal	400

* Estimated

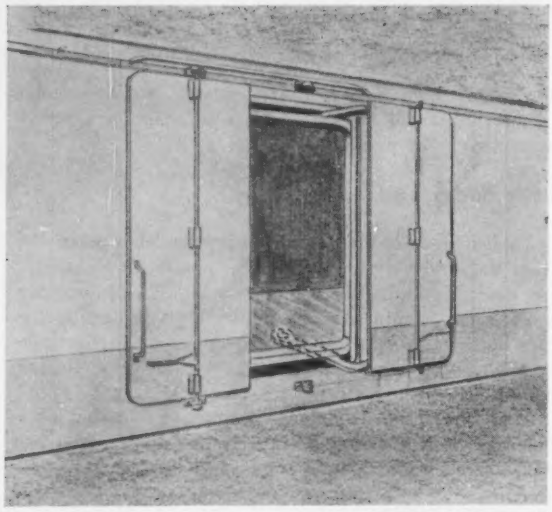


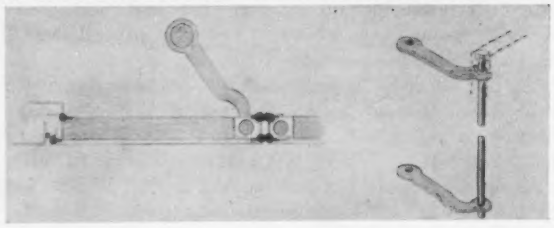
THE FRIGIFRATER BODY is built in four basic steps:

1. **The bottom pans (the bottom structural member to which the floor is applied) are built and insulated with 6-in. reflective aluminum.**
2. **The sides and ends are joined together uninsulated. This shell is then attached to the bottom pans.**
3. **The car body (minus the roof) has the walls and ends insulated by pouring foam from the top down.**
4. **The completed roof assembly, including insulation, is lowered on the body and welded in place.**



THE REFRIGERATED BOX, or car body, can be lifted clear of the underframe. The cooling unit can be operated by supplying either 220-volt a-c or diesel fuel.





EACH DOOR is mounted to a pivoted arm top and bottom. In opening it swings out a maximum of 13 inches. With one door open, the clear opening is 4 ft—with both doors, 8 ft. Vertical clearance above a 48-in. platform is 80 in.

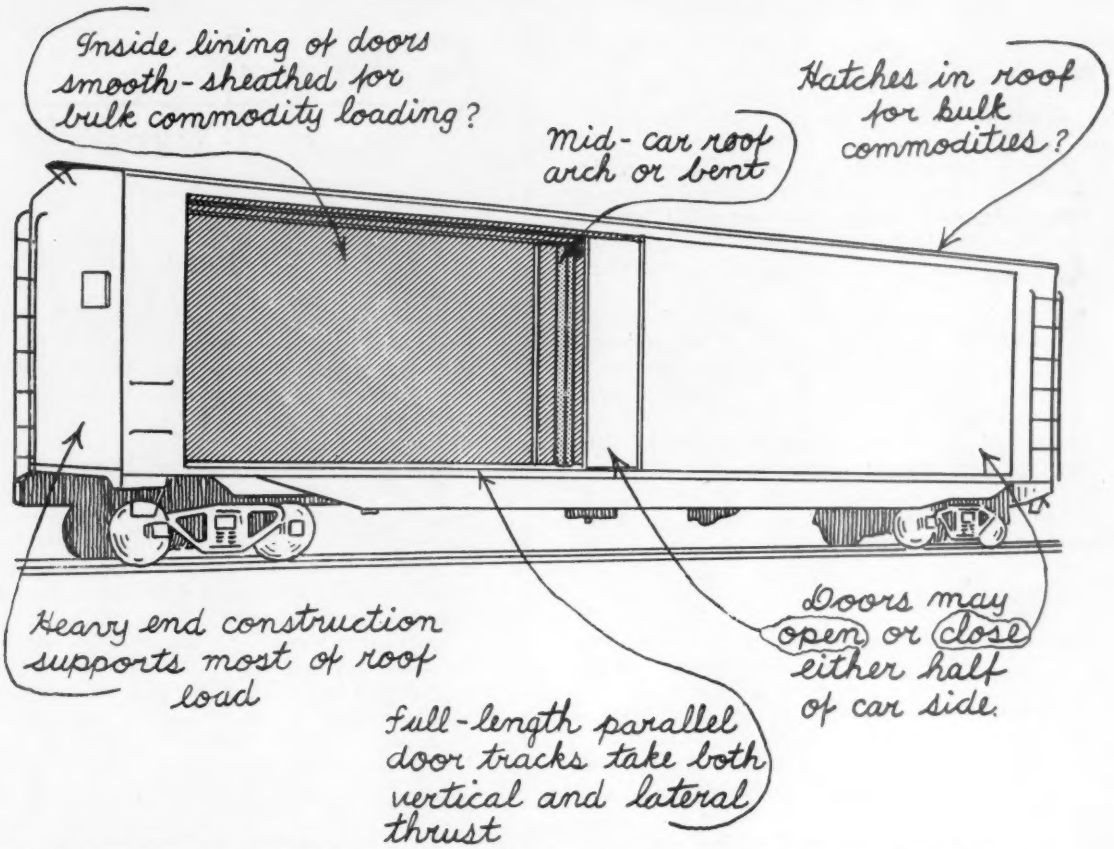
of the body. This insulation is the plastic foam which fills up the space between the inner and outer steel walls and makes a solid structural member in a manner similar to metal bonded to plywood.

This material fills every void and it does not pack down, even under great pressure, nor absorb moisture, thus preventing corrosion of hidden steel surfaces.

All exposed steel within the car is covered with sprayed-on neoprene or epon enamel. This protects against all forms of corrosion and also permits the use of sulphur dioxide inside the car body for ripening control.

Jacking is done on the underframe opposite the front and rear bolsters.

There are also four lifting pads on the car body accessible through cover plates, by which the entire car body can be lifted from the underframe. Other underframe and body equipment (brakes, type E coupler, rubber draft gear, uncoupling device, ride control trucks, roller bearings, etc.) are standard items.


Inside lining of doors smooth-sheathed for bulk commodity loading?
Mid-car roof arch or bent
Hatches in roof for bulk commodities?
Heavy end construction supports most of roof load
Doors may open or close either half of car side
Full-length parallel door tracks take both vertical and lateral thrust

WITHIN THE DESIGN ELEMENTS of new rack-end gypsum board cars, two Fort Dodge line engineers foresee a new basic freight car type approaching universal purpose. They ask *Railway Age* readers . . .

Why Not a Full-Door Box Car?

Here is an idea, now only in the formative stage, that may solve some thorny problems like lumber and sewer pipe loading yet avoid the spawning of another specialty car

An idea for a basically new kind of box car has come from two men assigned to a seemingly unrelated project.

The Fort Dodge, Des Moines & Southern recently arranged for the construction and lease of a new type rack-end flat car for gypsum board loading (*Railway Age*, February 14, page 15). Ralph E. Patterson, Jr., chief engineer of the road, and Donald D. Jones, roadmaster, were assigned by President Arthur P. Wheelock to work with the builder, Chicago Freight Car & Parts Co., during construction of the new cars.

Working one day over drawings of the rack-end car, it occurred to them that such a car could be roofed over and equipped with full-length sliding doors like the latest type kitchen cabinets. Such a door arrangement, they reasoned, would permit lift-truck loading of long and bulky commodities that must now be handled on flat cars and protected from the weather by tarpaulins. When they sketched such a car, more ideas came forth, and their reasoning went something like this:

If a car can be made with doors that will slide open to expose half the car at a time, why could not the doors be made strong enough to withstand lateral stress and built with a smooth inside lining so that the car could handle bulk commodities such as grain, as well as lumber, gypsum board and other similar products?

Compared to a conventional box car, the bulkhead ends of a full-door box car would have to be reinforced to withstand the longitudinal shock of shifting loads. This could be done with an end design not unlike the rack-end cars except that the ends would have to extend up to the height of a normal roofline. The load of the roof would be carried on beams extending from one end to the other and supported at the center (where the doors would overlap anyway) by a roof arch or bent. Such an arch would add rigidity to the car as well as support the roof, and the presence of its columns just inside the doors would offer little interference to loading. These columns would be securely affixed to the sills, in effect making the car a sort of covered bridge on wheels.

The doors of the car would be constructed of lightweight steel or aluminum but reinforced to withstand the lateral load of bulk lading when in closed position. They

would slide one past the other on a pair of parallel full length tracks so that when one door is slid behind the other, about half of the car would be open from floor to roof and from the center to the end bulkhead. To expose the other half, both doors would be slid in their respective tracks to the opposite end of the car. By moving the doors to the center, about one third of each end could be opened at once. The doors would be built with a smooth interior lining so that bulk material would not foul them with excessive friction and prevent opening.

Roof hatches could be provided for loading bulk commodities. And the vertical junction of the two doors, when in closed position, would have to be sealed with some kind of pliable edging, such as belting or rubber, so that there would be no leakage of the load en route. A similar seal strip would be necessary at the junction between the floor and the doors. A suitably tough but effective sealing strip would thus obviate the need for any special preparation (other than cleaning) prior to handling a bulk commodity load.

Hanging the Doors

Three methods of hanging the doors have been explored and the two men feel that while each has its problems, all of them are workable. They are:

• **Manual Operation.**—The doors should be supported on a full track at both the top and bottom. They should move on vertical as well as side thrust sealed bearings. As long as the tracks remain well oiled and clean, Messrs. Patterson and Jones feel the doors could be handled by one man. They point out that rings could easily be provided for a block and tackle should the need for more power arise.

• **Use of a Winch.**—In this case the doors would be hung in the same manner as described above except that a cable winch, operated by a gear mechanism built within the end bulkheads, would be actuated by a hand crank or drill to move the doors.

• **Worm Gear.**—While it would provide adequate mechanical power to operate the doors under almost any circumstance, a full-length worm gear arrangement presents additional problems. Such a gear would be operated by a reduction gear box built into the end bulkheads but it would be difficult to protect the worm from dust and dirt and bulk material during unloading. Another problem would be to overcome the powerful lateral thrust that bulk material would place upon the doors.

One possible solution would be to place the worm gears in the bottom of a channel of sufficient strength to carry that thrust. To provide against lateral shifting of merchandise loads, flush-recessed strap anchors would have to be located at frequent intervals along the floor since it would not be practical to anchor from the side except at the bent columns (in the center of the car) and at the end bulkheads.

Mr. Patterson and Mr. Jones know that considerable refinement will be necessary before a car of this type could actually be built. What they are striving toward is a universal purpose car rather than a specialty car. And what inspires them is that, in addition to doubling as a box car, a flat car and, in some instances, even as a hopper car, the full-door car opens up many attractive new traffic possibilities.

Benchmarks and Yardsticks

A BUSINESS CONCERN is usually regarded as having only economic motives to justify its existence. In other words, stockholders invest in it in the hope of profit. Officers and employees work for it because of the pay they receive. Customers purchase its products because these products are worth more to the buyers than the prices they have to pay in exchange.

Actually, however, adherence to moral principles is as important in holding a business enterprise together as attention to economic motives. Investors entrust their savings to it, not merely because they believe the business is economically sound, but also because of their confidence that management will not defraud them.

Employees work for a company, not just for the weekly paycheck, but because they have at least some respect for the integrity of their superiors and associates; and because of the reputation of the employing company. Where such respect is lacking, it is next to impossible to keep competent people on the job—regardless of the liberality of the pay or other "benefits."

It is a constant source of wonder to observers of business performance that relatively so few companies make conscious effort to maximize the non-economic inducements (e.g., thoughtfulness and courtesy) they offer to customers and employees. People go to a business concern—as investors, employees, customers—to pick up "values," i.e. things they want that the concern supplies. These "values" are importantly but not exclusively economic. And the more the moral and social values that a company offers its investors, employees and customers—the less it is likely to have to pay out in economic values in order to attract and retain them.

Moral goods that are attractive, especially to employees, are not necessarily of the "soft" variety. Most soldiers would rather fight under a tough commander who wins victories than for an easy-going one whose record of victory is less dependable. Similarly, ambitious employees will usually prefer a company with rigorous standards of performance and a record of growth, than one where the job is easier but the chances of advancement and security of employment are less attractive and less dependable.

There are some outstandingly successful companies in this country which seem—to your reporter at least—to owe much of their success to what appears to be a conscious effort on the part of managements, over a long period, to maximize the non-economic (moral and other) incentives they offer to customers, investors and employees. Economic success is frequently attained by means which are not economic at all.

J. C. L.

PRODUCTION LINEUP of machines integrates individual operations into smooth-working, high-speed unit.

This Gang Is Slashing Costs...

...OF RENEWING TIES AND SURFACING TRACK

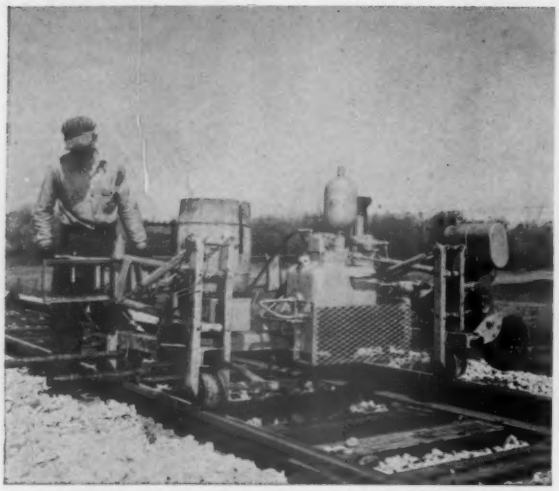
All-new 35-man organization on the Erie, working on a mechanized production-line basis, is doing nearly five times the work of road's conventional 39-man gangs using hand methods

Mechanized "to the hilt" and working without interference to or from traffic, a new track-reconditioning gang on the Erie is smashing all that road's production records.

The new mechanized organization for tie-renewal and surfacing work employs only 35 men. Production has been running better than ½ mile per 8-hr day with tie renewals averaging about 650 per mile. This production figure includes unproductive time lost while moving and because of bad weather.

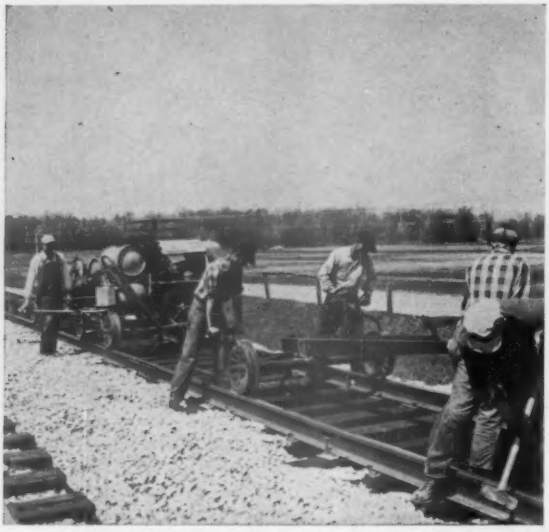
Used for the first time this year on the road's Western district at several locations along the double-track main line between North Judson, Ind., and Youngstown, Ohio, the organization has been named the "detour gang." It takes its name from the fact that it works only where train traffic can be detoured around the work on adjacent

How It's Done . . .



1 SPIKE PULLER leads off operations. One man behind this machine removes rail anchors and loosens bolts to allow rails to adjust for expansion and contraction.

2 TRACK RAISE of about 3 in. is made with Jack-All. Assistant foreman uses peep sight to line up sighting block on Jack-All with spot board (in distance).



5 SPIKE-DRIVING crew consists of two men setting spikes, one nipping with lever-action tie nipper, two driving with pneumatic guns and one handling push cars.

6 BALLAST DISTRIBUTOR picks up fresh stone from intertrack space and outside shoulder, then redeposits it uniformly on both sides of each rail for tamping.

main-line tracks. Maintenance officers feel that in order to make the most efficient use of the high-speed gang, exclusive track occupancy is required for a minimum of 7 hr per day. Where possible the track on which work is in progress is closed to traffic for the full 8-hr working day. Where traffic cannot be detoured, the road is using less-mechanized tie-renewal and surfacing organizations. The Erie plans eventually to have three of the "detour-gang" organizations for use where they can be employed effectively.

Temporary Crossovers Used

To permit trains to be detoured around the gang on an adjacent main track with as little interference to train operation as possible, temporary crossovers, or a combination of temporary and existing crossovers, are provided on each side of the location where the gang is working. The distance between crossovers is held to a maximum of about 10 miles. The crossovers used are No. 10 with a speed restriction of 10 mph.

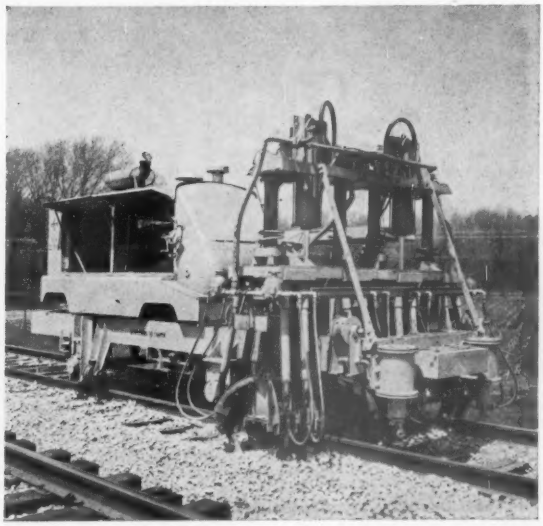
The 35-man working force consists of two foremen, two assistant foremen, 20 trackmen, nine operators, one truck driver, and one timekeeper. Equipment used by the gang includes 11 machines. They are:

1—Fairmont spike puller
2—Kershaw Jack-Alls
2—Nordberg Gandys
1—Ingersoll-Rand Model D-660 air compressor with two pneumatic spike hammers
1—McWilliams Ballast Distributor
1—McWilliams Multiple-Tool Air Tamper
1—Railway Track-work Model P-O Track Liner

3 OLD TIES are removed by crew of four men with a Gandy. This machine tows a push car with miscellaneous track tools for use as necessary by gang.

4 NEW TIES are inserted by second Gandy which pulls push car carrving spikes and extra ties. Men behind space ties uniformly with Simplex tie spacers.

7 DEFLECTIONS and minor irregularities in original raise are corrected by second Jack-All with operator, foreman and trackman, who picks up occasional low spot.



8 TAMPING is done out of face and to uniform compaction by 12-tool production unit. Two men tighten bolts, replace rail anchors and drive down spikes.

1—Kershaw Ballast Regulator
1—Kershaw Track Broom

Working like a factory production line, except that the machines move through the material rather than the material through the machines, the track-reconditioning organization is made up of a number of individual operations, all integrated so that they function as a single unit. The machines and men move over the track in sequence as shown by the illustrations on these pages.

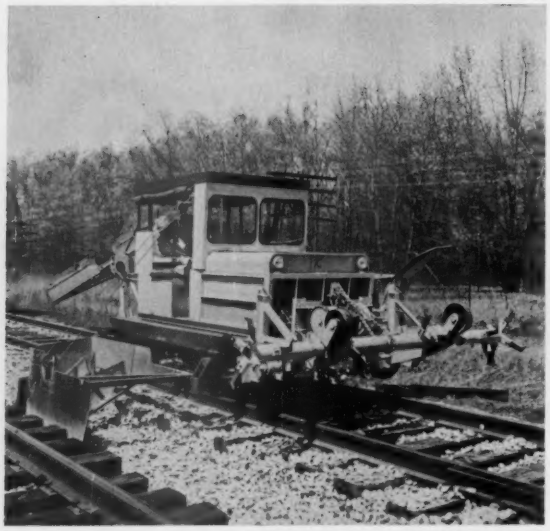
Gang Recruited Locally

Except for the operators of the larger machines, the men for the gang are recruited from the local area where work is in progress. Foremen are selected from the track supervisor's territory on which the gang is working. An assembly point for the gang is designated somewhere near the work location, usually the closest station. The gang is transported in trucks between this point and the work site. Regular machine operators who stay with the gang through the entire working season are housed in bunk cars at the assembly point.

The "detour gang," where it can be used effectively, replaces 39-man gangs which renew ties and tamp by hand. The latter gangs are followed up about a year later by a power-tamping gang making a finished surface over the territory covered by the tie-renewal crew the previous year. Maintenance officers report that the "detour gang" can do about five times as much work as the 39-man gangs over a given period of time.

More on next page ► ► ► ► ► ► ►

9 LINING is done by assistant foreman, who sights rail, and operator of hydraulic liner. Machine makes rough line, then finish lines on morning of following day.



10 BALLAST REGULATOR fills in weak spots, knocks down high spots, and shapes up ballast shoulder and intertrack space. Operator of this machine also handles . . .

11 . . . TRACK BROOM which is used to sweep ballast off rails and ties, thus completing job. Operator alternates back and forth between two machines.

In addition, the track covered by the "detour gang" has been solidly power-tamped, thus eliminating the power tamping required the following year when the work is done by hand. Another factor is the economy brought about by the savings in ballast with the mechanized gang. The gang uses an average of 525 tons of ballast per mile as compared with 850 tons per mile required for the hand-tamped tie-renewal work and the "follow-up" power-tamping the next year.

Tie Renewal on 6-Year Cycle

Tie renewals on the Erie are being made on a six-year cycle, a practice which was begun in 1953. Thus, the renewals have been quite heavy, running from 400 to 1,000 ties per mile. Where new rail has been laid recently or where relaying is planned within the next five years, tie spacing is being changed from the previous standard of 24 ties per rail to a uniform spacing of 20-in. centers (23.44 ties per panel).

In this case, section forces are added to the gang organization in order to keep up with the heavy tie-spacing work involved.

Prior to using the "detour gang" for renewing ties and surfacing in a given territory, ballast is cleaned out of face by a Pullman-Standard Ballast Cleaner or by a Nordberg Ballastex-Screenex unit. Furthermore, wherever the ballast is fouled, the track is cribbed by two P-S Power Cribbers working in tandem. The cribbers work about two weeks ahead of the ballast cleaning unit, which in turn operates about two weeks in advance of the "detour gang."

Additional ballast is unloaded ahead of the "detour gang" using special "B"-type ballast cars with both side and center-dump doors and hopper cars. Ballast trays or boards are used when unloading from hopper cars to control the amount and distribution of the new ballast.

Ballast Unloaded Ahead

The road's policy is to unload all ballast ahead of the gang, rather than unloading some ahead, then later on dumping additional ballast behind to bring the ballast section up to standard. However, on occasion, it has been found necessary to unload additional ballast behind since it is rather difficult to get just the right amount ahead.

The "detour gang" is working under the general direction of B. Blowers, chief engineer, and J. S. Parsons, assistant chief engineer-maintenance.

The gang was organized by and is working during the current season under the general supervision of H. J. Weccheider, engineer maintenance of way, Western district.

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10 Rectifier-type Locomotives
SKF Equipped for Trouble-Free Service

You'll see a lot of great things happening on the New Haven. There's a new spirit running all across the board in this progressive railroad. And one of the greatest improvements ever undertaken was the recent delivery of 10 high-speed G-E rectifier-type passenger locomotives operating from both AC and DC power sources over the road's electrified line between New York and New Haven, Conn. Every one of the 10 is 100% SKF equipped on journals.

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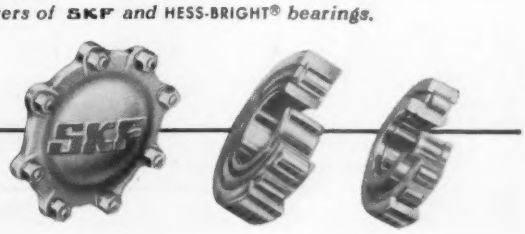

Railway Officers

(Continued from page 16)

coach yards, has been appointed trainmaster of Chicago Terminals.

MISSOURI PACIFIC.—**D. E. Snow** has been appointed general agent at Corpus Christi, Tex., succeeding **O. K. Dowell,** who has retired. **L. H. Riley** succeeds Mr. Snow as general agent at New Iberia, La.

NORTHERN PACIFIC.—**E. E. Chapman,** general freight agent, sales and service, at Seattle, has been appointed assistant to vice-president in charge of traffic at St. Paul. **Ober A. Kobs,** assistant general freight and passenger agent at Duluth, succeeds Mr. Chapman, while **T. O. Kirkvold,** general agent at Billings, Mont., succeeds Mr. Kobs. **D. J. Powers,** city freight and passenger agent at Billings, succeeds Mr. Kirkvold.

ANNUAL REPORTS

(Supplementing lists published in *Railway Age*, May 16, page 185, and April 11, page 16)

Railroad		Operating Revenues	Operating Expenses	Fixed Charges	Net Income	Current Assets*	Current Liabilities*	Long Term Debt*
Alabama Great Southern	1954	$ 17,486,056	$ 12,961,885	$ 306,534	$ 3,160,439	$ 5,622,230	$ 4,972,820	$ 9,752,100
	1953	19,861,576	14,020,416	322,185	3,848,774	6,978,658	7,696,478	10,442,700
Atlanta & West Point	1954	3,891,590	3,302,503	29,324	194,895	2,179,712	740,833	954,790
	1953	4,508,290	3,749,273	34,378	286,830	2,360,168	921,978	1,145,450
Atlantic Coast Line	1954	152,013,278	127,238,851	6,900,903	11,747,711	46,591,034	23,169,074	178,823,962
	1953	164,579,094	141,646,068	6,611,800	12,028,993	54,232,531	26,567,503	183,971,071
Belt of Chicago	1954	12,957,245	8,628,071	1,785,922	185,792	4,667,973	2,500,296	3,156,311
	1953	14,136,887	9,363,195	1,798,044	187,615	6,066,566	3,541,544	3,677,646
Charleston & Western Carolina	1954	6,603,687	5,356,973	395,344	455,841	1,498,839	1,050,986	9,323,793
	1953	6,938,646	5,497,091	422,834	508,469	1,879,948	1,214,914	9,958,805
Chicago & Illinois Midland	1954	7,750,623	5,898,137	131,528	442,826	2,454,349	2,989,418	1,200,000
	1953	9,051,186	6,430,873	144,900	862,973	4,049,814	3,266,034	1,700,000
Chicago, Burlington & Quincy	1954	252,352,714	190,333,761	6,643,190	23,011,720	86,140,730	47,524,094	216,880,462
	1953	278,413,812	203,124,368	6,286,282	25,661,506	93,000,580	57,021,944	217,399,396
Chicago, St. Paul, Minneapolis & Omaha	1954	33,017,404	28,188,992	2,508,293	2,900,166d	5,933,083	4,604,144	53,658,832
	1953	34,333,540	29,981,597	2,514,889	2,974,707d	6,605,155	4,743,455	54,794,925
Cincinnati, New Orleans & Texas Pacific	1954	41,747,319	26,430,199	1,951,425	5,297,605	24,413,249	18,362,170	5,125,880
	1953	46,845,306	30,973,631	1,998,304	5,354,881	28,241,823	18,103,790	6,805,360
Clinchfield	1954	20,875,383	12,666,313	2,453,602	3,756,912	6,453,408	17,001,648	12,797,813
	1953	24,279,215	14,668,203	2,470,301	4,748,508	6,318,282	16,005,380	14,208,650
Colorado & Southern	1954	14,424,059	11,403,441	168,705	1,316,918	6,389,899	3,269,077	18,699,338
	1953	16,279,128	11,108,416	152,151	2,201,931	7,661,096	5,067,117	18,949,292
Detroit, Toledo & Ironton	1954	17,705,072	13,229,611	501,846	3,722,956	6,087,898	2,442,009	16,832,610
	1953	22,468,195	15,322,648	466,732	2,855,122	7,549,117	5,229,539	17,116,548
Duluth, South Shore & Atlantic	1954	6,799,022	6,048,351	291,776	None	2,524,856	1,041,470	6,978,823
	1953	8,149,401	7,024,850	405,271	111,835	2,708,668	1,170,062	7,385,934
Florida East Coast	1954	31,682,030	26,888,693	2,827,323	4,311,955d	20,946,764	2,566,557	64,648,302
	1953	32,897,694	26,118,594	2,835,964	1,757,070d	23,441,634	2,350,910	61,886,002
Fort Worth & Denver	1954	23,701,489	17,431,267	1,105,330	1,765,660	6,011,784	4,290,448	22,409,982
	1953	22,972,755	16,622,104	1,117,563	1,725,844	6,765,209	4,896,694	23,693,008
Georgia	1954	8,448,511	7,413,594	724,521	120,041	3,366,605	1,081,471	16,466,072
	1953	9,623,473	7,808,415	714,155	1,025,295	3,817,053	1,272,835	16,584,769
Georgia Southern & Florida	1954	9,596,307	7,092,390	327,546	135,765d	2,772,748	1,798,360	6,530,758
	1953	9,916,815	6,290,702	320,284	417,697	5,227,544	2,167,575	6,422,503
Great Northern	1954	250,254,361	188,621,367	8,095,403	25,441,459	102,171,278	43,649,214	274,351,053
	1953	268,034,981	194,883,917	8,060,361	29,942,607	107,367,517	52,307,243	268,088,491
Gulf Coast Lines	1954	40,180,408	30,455,015	2,968,719	3,724,325	15,407,843	6,993,601	71,323,898
	1953	43,216,715	33,445,390	2,932,520	2,757,368	15,517,207	9,848,458	70,187,067
Indianapolis Union	1954	743,962	3,473,715	181,022	297,649	1,550,699	981,818	4,999,578
	1953	833,915	3,727,152	190,158	304,215	1,735,715	1,059,819	5,530,156
International-Great Northern	1954	31,851,722	27,185,626	3,042,099	192,260	11,360,812	7,129,954	60,746,240
	1953	37,237,215	31,559,452	3,029,317	1,018,944	10,850,492	8,222,553	60,037,417
Missouri Pacific	1954	213,362,316	167,824,161	18,017,301	11,923,857	72,644,413	38,007,686	384,262,068
	1953	238,261,929	193,135,903	17,973,438	10,771,491	89,257,977	31,812,725	384,576,743
Monongahela	1954	5,622,691	3,751,113	535,594	341,985d	1,272,297	1,212,555	11,299,822
	1953	7,726,270	4,687,090	514,553	245,671	1,939,298	1,325,067	11,047,504
Nashville, Chattanooga & St. Louis	1954	35,955,311	27,120,723	1,862,121	3,232,714	16,594,554	5,996,042	27,421,557
	1953	39,945,546	28,666,612	1,796,614	4,543,150	17,900,299	7,342,214	29,595,779
New Orleans & Northeastern	1954	11,808,221	7,545,630	14,117	1,717,251	4,183,490	5,303,597	512,480
	1953	13,629,742	6,914,119	20,812	2,632,799	6,198,699	6,444,552	836,960
Southern	1954	249,079,701	176,101,145	13,465,146	26,262,680	133,044,029	69,700,123	277,048,270
	1953	275,212,345	186,399,730	13,201,933	33,190,324	138,756,693	79,225,057	274,329,129
Toronto, Hamilton & Buffalo	1954	4,857,749	3,450,359	153,102	796,520	4,179,404	2,145,592	3,200,000
	1953	6,019,817	3,684,361	121,534	1,196,367	5,103,729	2,213,671	3,950,000
Virginian	1954	36,974,060	22,844,227	2,234,947	6,321,362	22,074,469	10,883,651	75,581,000
	1953	37,916,624	25,845,541	2,159,559	5,449,279	22,163,399	11,574,606	73,389,580
Western Maryland	1954	41,418,378	31,836,456	2,714,503	7,225,463	19,360,090	7,351,586	70,334,659
	1953	50,658,713	33,787,855	2,994,533	7,674,025	20,820,394	13,944,680	66,509,359
Western of Alabama	1954	4,319,481	3,411,463	84,382	535,068	2,172,692	669,320	2,096,416
	1953	4,806,389	3,641,682	81,261	527,331	2,428,208	949,295	2,011,132

* On December 31
d Deficit

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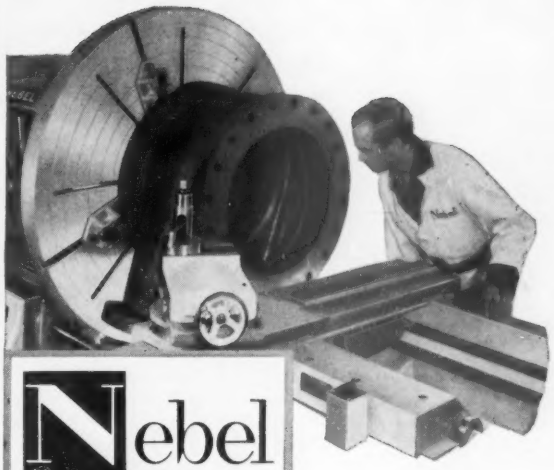

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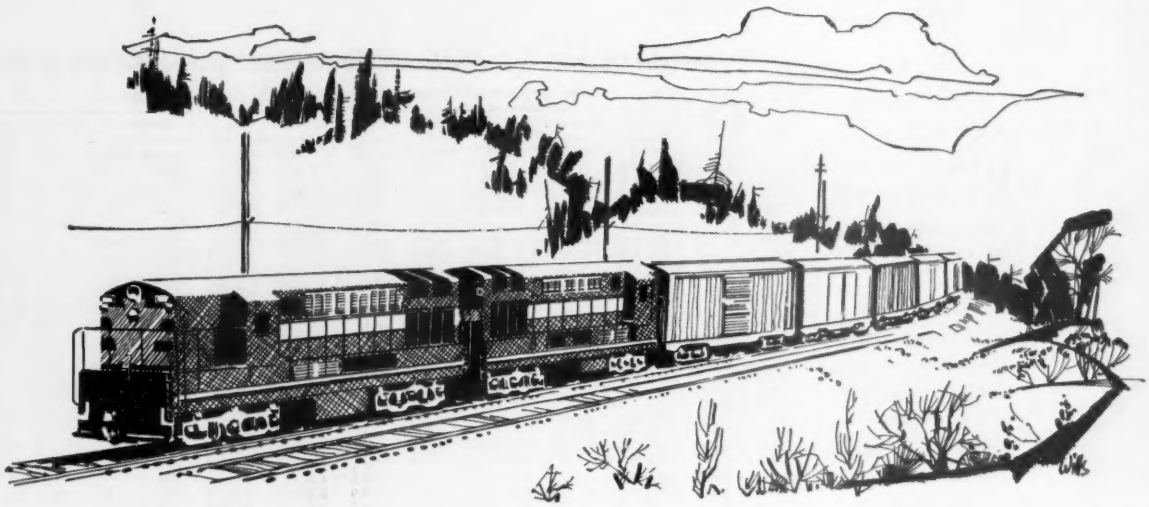

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Freight Operating Statistics of Large Steam Railways—Selected Items

	Region, Road and Year	Miles of road operated	Locomotive-Miles: Train-miles	Locomotive-Miles: Principal and helper	Locomotive-Miles: Light	Car-Miles: Loaded (*thousands*)	Car-Miles: Per cent loaded	Ton-miles (*thousands*): Gross excl. locos & tenders	Ton-miles (*thousands*): Net rev. and non-rev.	Road-locos. on line: Serviceable: Unstored	Road-locos. on line: Serviceable: Stored	Road-locos. on line: B.O.	Road-locos. on line: Per cent B.O.
New Eng. Region	Boston & Maine 1955	1,564	244,644	250,496	9,277	9,885	66.0	635,535	253,767	69	1	6	7.9
	1954	1,665	250,095	255,558	9,449	9,570	64.6	626,296	243,350	72	1	7	8.8
	N. Y., N. H. & Htfd. 1955	1,746	290,684	290,710	18,979	12,593	60.5	775,998	311,373	85	..	8	8.6
	1954	1,746	281,995	281,995	19,343	12,079	67.5	749,000	296,041	95	..	6	5.9
Great Lakes Region	Delaware & Hudson 1955	792	182,496	188,009	6,474	9,440	70.6	631,870	324,879	36	..	3	7.7
	1954	793	183,065	188,337	10,397	8,586	64.6	595,889	291,137	37	5	3	6.7
	Del., Lack. & Western 1955	962	276,975	288,681	21,397	12,448	68.4	804,777	346,219	63	..	..	..
	1954	962	258,390	272,398	20,515	11,441	65.4	754,461	317,966	62	..	2	3.1
	Erie 1955	2,224	571,698	579,800	14,521	31,557	68.7	1,987,355	802,906	159	..	5	3.0
	1954	2,225	539,046	542,154	17,997	30,362	67.0	1,908,629	750,703	163	..	2	1.2
	Grand Trunk Western 1955	952	269,671	277,873	2,037	9,114	60.9	634,055	243,554	61	2	18	22.2
	1954	952	254,588	259,785	2,014	8,730	59.1	626,608	243,506	55	2	18	24.0
	Lehigh Valley 1955	1,142	217,984	221,982	6,702	10,949	66.7	746,228	345,465	33	..	1	2.9
	1954	1,150	207,891	211,351	5,592	10,175	64.4	690,382	304,839	31	2	1	2.9
	New York Central 1955	10,661	2,613,220	2,659,771	106,118	106,667	61.3	7,631,705	3,392,251	547	51	104	14.8
	1954	10,663	2,365,496	2,408,493	90,115	97,168	59.3	7,015,933	3,028,653	576	149	173	19.3
	New York, Chic. & St. L. 1955	2,155	738,083	772,593	7,943	31,206	67.6	2,134,363	975,037	174	3	31	14.9
	1954	2,161	676,108	700,478	6,426	28,489	64.0	1,984,336	841,348	170	44	35	14.1
	Pitts. & Lake Erie 1955	221	68,396	68,464	....	3,354	71.3	284,919	181,640	13	7	1	4.8
	1954	221	55,465	55,685	....	2,734	63.9	239,261	145,277	15	7	..	..
	Wabash 1955	2,381	551,683	552,828	6,027	24,850	65.6	1,613,412	612,846	101	..	2	1.9
	1954	2,381	518,195	519,898	6,828	23,078	64.5	1,496,133	555,632	103	..	..	..
Central Eastern Region	Baltimore & Ohio 1955	6,072	1,658,737	1,847,479	175,841	70,739	63.9	5,468,927	2,711,188	449	2	97	17.7
	1954	6,077	1,443,130	1,581,693	128,373	54,020	60.9	4,503,888	2,102,774	431	87	106	17.0
	Bessemer & Lake Erie 1955	208	61,640	67,007	228	3,320	57.6	414,868	269,503	18	..	..	..
	1954	209	53,530	57,963	202	3,138	63.7	363,229	238,806	15	..	..	..
	Central RR Co. of New Jersey 1955	613	123,165	123,970	5,219	4,895	66.9	356,876	185,284	61	..	6	9.0
	1954	613	123,773	124,847	5,977	4,737	64.0	356,111	182,416	69	2	11	13.4
	Chicago & Eastern Ill 1955	853	116,342	116,342	2,072	5,481	69.0	373,713	185,165	27	..	2	6.9
	1954	853	124,146	124,146	2,609	5,098	63.9	364,189	178,032	26	..	3	10.3
	Elgin, Joliet & Eastern 1955	236	89,215	89,495	....	2,919	64.1	234,672	121,037	36	3	2	4.9
	1954	236	83,079	83,581	....	2,632	64.3	207,916	112,108	32	6	3	7.3
	Pennsylvania System 1955	9,892	3,048,932	3,273,463	256,879	135,246	65.3	9,769,642	4,643,841	811	49	464	35.0
	1954	9,906	2,721,163	2,901,117	197,654	117,226	61.4	8,614,230	3,900,787	745	341	361	24.9
	Reading 1955	1,303	325,572	328,312	11,660	12,717	64.9	1,002,920	530,527	151	5	26	14.3
	1954	1,305	284,620	288,266	10,085	11,111	61.0	865,503	429,592	156	36	17	8.1
	Western Maryland 1955	846	171,780	178,289	9,728	6,951	64.4	580,245	331,305	37	..	..	..
	1954	857	158,973	170,017	8,521	6,319	62.7	528,276	294,836	55	25	..	..
Pocahontas Region	Chesapeake & Ohio 1955	5,046	1,536,997	1,562,127	46,081	69,638	58.4	5,965,572	3,347,674	379	22	183	31.3
	1954	5,032	1,245,809	1,268,304	30,877	53,155	58.0	4,454,340	2,464,172	324	92	176	29.7
	Norfolk & Western 1955	2,104	716,757	766,180	62,022	36,376	59.9	3,346,483	1,850,095	211	23	32	12.0
	1954	2,113	591,841	626,473	49,063	27,461	58.5	2,461,270	1,312,753	203	43	30	10.9
Southern Region	Atlantic Coast Line 1955	5,336	947,346	947,349	10,471	31,147	57.6	2,264,956	964,908	236	..	8	3.3
	1954	5,341	869,928	869,928	10,474	26,763	57.8	1,908,999	813,490	240	..	7	2.8
	Central of Georgia 1955	1,731	194,315	194,341	1,800	8,355	70.5	562,460	274,985	73	..	2	2.7
	1954	1,731	186,599	186,625	2,091	7,285	67.0	491,809	228,937	69	..	1	1.4
	Gulf, Mobile & Ohio 1955	2,717	281,359	281,359	162	16,727	71.5	1,094,681	519,041	82	..	7	7.9
	1954	2,718	285,717	285,717	429	15,003	68.6	1,019,479	472,167	87	..	2	2.2
	Illinois Central 1955	6,531	1,281,648	1,283,590	39,009	54,266	62.8	3,914,693	1,797,943	438	53	150	23.4
	1954	6,537	1,265,528	1,270,105	41,540	48,091	62.1	3,426,269	1,521,260	501	76	77	11.8
	Louisville & Nashville* 1955	4,715	663,215	668,243	12,451	23,003	62.2	1,817,484	941,855	184	37	9	3.9
	1954	4,722	884,187	903,744	17,591	31,783	61.5	2,383,919	1,146,836	216	86	31	9.3
	Nash., Chatt. & St. Louis* 1955	1,043	111,046	112,477	2,429	3,747	70.4	254,900	126,149	49	..	4	7.5
	1954	1,032	176,348	180,830	3,097	6,068	69.3	392,887	180,343	50	..	3	5.7
	Seaboard Air Line 1955	4,053	700,270	700,270	2,957	28,110	61.4	2,048,478	858,802	137	..	9	6.2
	1954	4,067	679,920	679,920	4,105	26,357	59.9	1,927,111	798,420	144	..	9	5.9
	Southern 1955	6,264	994,965	995,025	18,148	48,976	68.1	3,182,582	1,468,945	278	..	3	1.1
	1954	6,262	934,924	935,034	12,821	39,035	65.8	2,550,750	1,128,236	266	..	4	1.5
Northwestern Region	Chicago & North Western 1955	7,848	716,441	718,471	9,336	32,096	66.5	2,187,116	1,011,024	134	16	45	23.1
	1954	7,850	698,763	702,657	10,986	29,692	65.3	2,057,386	920,452	175	38	68	24.2
	Chicago Great Western 1955	1,437	132,284	132,284	234	8,110	68.5	547,249	251,713	30	..	3	9.1
	1954	1,437	134,765	134,765	182	7,674	68.2	503,008	220,968	28	..	5	15.2
	Chic., Milw., St. P. & Pac. 1955	10,633	991,420	1,010,095	19,688	44,746	66.7	3,017,634	1,359,722	261	52	25	7.4
	1954	10,631	964,331	981,028	22,312	41,457	64.0	2,847,702	1,262,874	285	92	44	10.5
	Chic., St. P., Minn. & Omaha 1955	1,606	163,152	164,328	4,150	5,434	69.1	366,546	161,914	61	..	12	16.4
	1954	1,606	156,973	158,106	4,508	4,970	67.3	339,795	147,899	64	3	26	28.0
	Duluth, Missabe & Iron Range 1955	569	154,961	155,528	1,258	7,023	51.4	751,333	460,013	60	2	4	6.1
	1954	566	142,409	142,900	1,072	6,545	50.4	713,677	429,248	64	4	6	8.1
	Great Northern 1955	8,270	1,205,375	1,210,944	38,652	49,630	67.0	3,653,236	1,846,502	239	129	34	8.5
	1954	8,294	1,068,718	1,074,623	28,261	44,842	64.5	3,404,168	1,683,168	244	181	37	8.0
	Minneap., St. P. & S. Ste. M. 1955	4,171	395,328	397,143	2,175	14,020	69.8	927,995	447,433	81	11	5	5.2
	1954	4,169	383,801	386,565	3,591	12,345	68.2	799,264	374,976	95	6	16	13.7
	Northern Pacific 1955	6,570	851,739	870,698	24,687	35,898	70.5	2,409,615	1,133,369	280	26	58	15.9
	1954	6,570	829,223	855,590	33,630	33,110	64.9	2,328,413	1,052,695	290	49	58	14.6
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.) 1955	13,098	2,569,732	2,686,322	76,282	116,883	62.1	8,058,392	2,930,592	542	51	42	6.6
	1954	13,076	2,200,071	2,261,803	59,657	97,811	63.7	6,681,683	2,508,963	535	142	22	3.1
	Chic., Burl. & Quincy 1955	8,807	1,069,444	1,065,410	30,367	47,713	69.8	3,052,665	1,364,009	212	59	24	8.1
	1954	8,824	1,083,068	1,081,754	32,211	45,881	68.1	3,005,310	1,345,056	214	86	33	9.9
	Chic., Rock I. & Pac. 1955	7,904	870,595	865,049	944	35,344	64.2	2,484,528	1,040,988	173	..	2	1.1
	1954	7,861	891,004	889,062	2,405	33,872	59.4	2,493,845	1,007,913	163	12	8	4.4
	Denver & R. G. Wn 1955	2,165	312,269	334,591	32,494	15,725	70.0	1,064,285	514,424	64	36	18	15.3
	1954	2,164	285,243	303,419	27,021	13,346	73.6	900,550	423,961	59	62	18	12.9
	Southern Pacific 1955	8,072	2,309,695	2,421,115	234,224	108,928	66.5	7,347,547	2,990,705	692	31	77	9.6
	1954	8,065	2,231,941	2,353,360	302,658	101,973	63.5	7,126,429	2,853,272	558	121	122	15.2
	Union Pacific 1955	9,813	2,273,962	2,321,038	113,408	109,639	67.4	7,131,644	3,021,490	397	187	117	16.7
	1954	9,816	2,145,688	2,195,355	104,839	99,765	67.2	6,530,022	2,731,319	388	388	91	10.5
	Western Pacific 1955	1,190	236,566	248,957	18,207	11,085	71.3	732,410	326,744	40	..	..	..
	1954	1,190	220,621	222,202	11,173	9,704	71.2	644,757	298,541	40	4	..	..
Southwestern Region	International-Gt. Northern** 1955	1,104	149,156	149,156	53	6,103	65.0	437,204	196,577	42	..	..	..
	1954	1,103	149,042	149,042	....	5,972	63.5	421,139	182,987	51	..	..	..
	Kansas City Southern 1955	886	153,756	153,949	124	8,697	67.7	602,189	274,798	24	..	2	7.7
	1954	886	133,488	133,704	132	7,845	65.3	547,596	238,200	23	..	1	4.2
	Mo.-Kans.-Texas Lines 1955	3,230	331,495	331,495	3,443	13,979	65.8	904,142	384,835	93	..	..	..
	1954	3,229	342,438	342,438	3,641	13,559	63.0	895,144	376,311	88	..	1	1.1
	Missouri Pacific** 1955	6,892	1,012,624	1,012,624	10,929	46,337	65.9	3,178,818	1,394,715	242	20	106	28.8
	1954	6,904	979,766	981,262	11,286	43,405	63.6	3,002,894	1,257,810	215	70	98	25.6
	Texas & Pacific 1955	1,822	322,961	322,961	3,016	14,486	63.4	1,042,312	396,164	59	..	2	3.3
	1954	1,827	300,282	300,282	2,869	13,618	63.5	940,384	353,636	61	..	..	..
	St. Louis-San Francisco 1955	4,564	612,823	612,851	5,865	25,363	67.2	1,656,760	732,423	128	..	6	4.5
	1954	4,564	590,676	591,056	5,688	22,146	65.4	1,482,355	650,811	135	..	4	2.9
	St. Louis Southw. Lines 1955	1,554	323,851	323,855	1,555	15,196	69.1	952,514	425,787	59	1	10	14.3
	1954	1,555	289,296	289,322	1,377	13,370	69.0	831,572	371,724	55	10	7	9.7
	Texas & New Orleans 1955	4,302	703,786	703,786	1,871	29,194	65.6	2,000,176	875,996	142	..	8	5.3
	1954	4,279	675,703	675,703	5,787	26,236	62.9	1,827,172	771,888	152	..	42	21.6

For the Month of May 1955 Compared with May 1954

Region, Road and Year		Freight cars on line: Home	Foreign	Total	Per Cent B.O.	G.t.m.per train-hr. excl.locos and tenders	G.t.m.per train-mi. excl.locos and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd car-mile	Net ton-mi. per car-day	Car-miles per car-day	Net ton-mi. per road-mi.	Train-miles per train-hour	Miles per loco. per day
New Eng. Region	Boston & Maine	1955	2,409	8,774	11,183	5.4	40,648	2,606	1,041	25.7	747	44.1	5,234	15.6	125.0
		1954	2,994	7,276	10,270	4.7	41,182	2,509	975	25.4	756	46.0	4,715	16.4	118.0
	N. Y., N. H. & Htfd	1955	2,027	15,845	17,872	2.3	45,446	2,670	1,071	24.7	576	34.5	5,753	17.0	127.2
		1954	3,202	12,185	15,387	2.3	44,931	2,656	1,050	24.5	617	37.9	5,466	16.9	117.8
Great Lakes Region	Delaware & Hudson	1955	3,839	4,723	8,562	5.5	63,870	3,480	1,789	34.4	1,163	47.9	13,232	18.4	166.2
		1954	7,607	3,512	11,119	5.5	62,977	3,274	1,600	33.9	825	37.7	11,843	19.3	152.0
	Del. Lack. & Western	1955	5,447	9,520	14,967	2.7	50,906	2,958	1,273	27.8	741	38.9	11,610	17.5	176.1
		1954	8,854	8,013	16,867	4.5	50,348	2,972	1,252	27.8	601	33.0	10,662	17.2	163.2
	Erie	1955	7,897	17,863	25,760	4.1	66,968	3,515	1,420	25.1	992	57.4	11,646	19.3	131.0
		1954	12,828	15,076	27,904	5.3	67,814	3,576	1,406	24.7	876	52.9	10,884	19.2	119.8
	Grand Trunk Western	1955	3,640	10,111	13,751	9.5	51,764	2,366	909	26.7	593	36.4	8,253	22.0	119.4
		1954	4,546	8,468	13,014	3.9	52,087	2,486	966	27.9	621	37.7	8,251	21.2	119.6
	Lehigh Valley	1955	8,532	8,460	16,992	3.3	71,293	3,483	1,612	31.6	655	31.2	9,758	20.8	230.5
		1954	9,735	6,333	16,068	6.6	68,098	3,377	1,491	30.0	614	31.8	8,551	20.5	220.5
	New York Central	1955	61,797	91,836	153,633	5.7	51,984	2,964	1,317	31.8	722	37.0	10,264	17.8	140.6
		1954	87,155	76,327	163,482	10.5	53,392	3,008	1,299	31.2	602	32.6	9,162	18.0	101.6
	New York, Chic. & St. L.	1955	6,087	16,649	22,736	8.0	52,226	2,963	1,353	31.2	1,303	61.7	14,595	18.1	130.4
		1954	11,148	13,352	24,500	7.7	56,091	2,975	1,261	29.5	1,138	60.3	12,559	19.1	100.3
	Pitts. & Lake Erie	1955	3,846	7,266	11,112	4.9	64,681	4,198	2,676	54.2	515	13.3	26,513	15.5	115.8
		1954	11,388	6,159	17,547	6.8	63,820	4,315	2,620	53.1	283	8.3	21,205	14.8	86.4
	Wabash	1955	8,072	10,631	18,703	6.7	64,341	2,940	1,117	24.7	1,060	65.6	8,303	22.0	184.8
		1954	10,148	9,620	19,768	6.4	67,354	2,903	1,078	24.1	950	61.1	7,528	23.3	170.9
Central Eastern Region	Baltimore & Ohio	1955	49,148	49,654	98,802	13.7	50,832	3,355	1,663	38.3	870	35.5	14,403	15.4	126.2
		1954	62,576	35,180	97,756	11.6	51,140	3,159	1,475	38.9	691	29.2	11,162	16.4	92.5
	Bessemer & Lake Erie	1955	3,995	963	4,958	21.8	108,690	6,922	4,496	81.2	1,520	32.5	41,796	16.1	141.7
		1954	7,240	764	8,004	9.1	107,179	6,992	4,597	76.1	882	18.2	36,858	15.8	135.5
	Central RR Co. of New Jersey	1955	3,967	10,228	14,195	7.1	42,309	3,017	1,566	37.9	425	16.8	9,750	14.6	85.2
		1954	5,475	8,942	14,417	10.6	40,647	3,001	1,537	38.5	414	16.8	9,599	14.1	76.6
	Chicago & Eastern Ill	1955	3,068	3,013	6,081	6.9	51,117	3,218	1,594	33.8	930	39.9	6,881	15.9	142.4
		1954	3,624	2,911	6,535	10.1	53,275	2,955	1,445	34.9	885	39.6	6,616	18.2	151.4
	Elgin, Joliet & Eastern	1955	7,195	8,993	16,188	5.6	22,604	2,765	1,426	41.5	240	9.0	16,544	8.6	94.3
		1954	7,597	6,532	14,129	6.4	23,528	2,617	1,411	42.6	260	9.5	15,324	9.4	85.2
	Pennsylvania System	1955	110,286	95,615	205,901	13.5	55,809	3,297	1,567	34.3	729	32.5	15,144	17.4	94.0
		1954	108,562	95,932	204,494	11.0	58,554	3,253	1,473	33.3	615	30.1	12,703	18.5	74.5
	Reading	1955	12,781	17,076	29,857	5.3	47,509	3,081	1,630	41.7	567	20.9	13,134	15.4	71.0
		1954	21,612	11,900	33,512	6.1	45,201	3,042	1,510	38.7	406	17.2	10,619	14.9	53.3
	Western Maryland	1955	4,348	3,738	8,086	4.7	49,785	3,427	1,957	47.7	1,339	43.6	12,633	14.7	180.2
		1954	8,496	2,363	10,859	4.0	49,261	3,410	1,903	46.7	859	29.4	11,098	14.8	78.9
Pocahontas Region	Chesapeake & Ohio	1955	48,504	36,032	84,536	3.1	73,219	3,908	2,193	48.1	1,296	46.2	21,401	18.9	95.6
		1954	58,328	21,752	80,080	4.2	69,374	3,598	1,990	46.4	975	36.3	15,797	19.4	76.7
	Norfolk & Western	1955	30,511	8,341	38,852	1.8	81,763	4,813	2,661	50.9	1,517	49.8	28,365	17.5	108.6
		1954	41,936	6,014	47,950	2.6	74,287	4,255	2,270	47.8	880	31.5	20,041	17.9	85.8
Southern Region	Atlantic Coast Line	1955	18,950	17,836	36,786	3.8	44,086	2,406	1,025	31.0	840	47.1	5,833	18.4	139.7
		1954	21,437	13,199	34,636	2.8	40,318	2,202	938	30.4	737	42.0	4,913	18.4	126.7
	Central of Georgia	1955	2,708	6,752	9,460	4.2	50,508	2,898	1,417	32.9	950	40.9	5,124	17.4	91.6
		1954	3,512	4,636	8,148	4.9	48,292	2,648	1,233	31.4	886	42.1	4,266	18.3	95.6
	Gulf, Mobile & Ohio	1955	5,189	9,210	14,399	2.6	76,290	3,901	1,850	31.0	1,100	49.6	6,162	19.6	110.9
		1954	6,576	7,752	14,328	3.9	73,918	3,578	1,657	31.5	1,055	48.9	5,604	20.7	110.8
	Illinois Central	1955	25,364	25,480	50,844	2.6	52,430	3,093	1,421	33.1	1,120	53.8	8,880	17.2	67.5
		1954	31,297	19,184	50,481	4.8	48,133	2,741	1,217	31.6	955	48.6	7,507	17.8	70.1
	Louisville & Nashville*	1955	27,947	14,679	42,626	5.5	46,838	2,747	1,424	40.9	742	29.1	6,444	17.1	99.8
		1954	39,817	12,253	52,070	3.7	48,723	2,703	1,300	36.1	702	31.6	7,835	18.1	97.1
	Nash., Chatt. & St. Louis*	1955	3,997	2,908	6,905	4.5	41,073	2,306	1,141	33.7	600	25.3	3,902	17.9	76.5
		1954	3,876	3,065	6,941	3.3	44,229	2,230	1,023	29.7	801	38.9	5,637	19.9	121.0
	Seaboard Air Line	1955	12,123	16,079	28,202	2.5	55,567	2,987	1,252	30.6	1,009	53.8	6,835	19.0	183.4
		1954	14,529	12,571	27,100	1.7	53,156	2,874	1,191	30.3	928	51.1	6,333	18.8	170.2
	Southern	1955	17,843	21,969	39,812	4.6	53,987	3,220	1,486	30.0	1,116	54.7	7,565	16.9	127.2
		1954	19,968	22,880	42,848	3.4	50,035	2,736	1,210	28.9	848	44.6	5,812	18.3	122.7
Northwestern Region	Chicago & North Western	1955	18,382	28,725	47,107	4.5	55,112	3,112	1,439	31.5	712	34.0	4,156	18.1	131.4
		1954	21,931	25,015	46,946	5.5	51,992	3,021	1,352	31.0	626	30.9	3,782	17.7	88.7
	Chicago Great Western	1955	1,689	4,782	6,471	2.9	76,560	4,145	1,907	31.0	1,352	63.6	5,651	18.5	135.2
		1954	1,669	4,067	5,736	3.5	73,604	3,743	1,644	28.8	1,258	64.1	4,960	19.7	137.0
	Chic., Milw., St. P. & Pac.	1955	31,153	32,140	63,293	5.9	58,241	3,053	1,376	30.4	706	34.8	4,125	19.1	107.1
		1954	38,073	27,607	65,680	6.8	54,898	2,964	1,315	30.5	632	32.4	3,832	18.6	82.0
	Chic., St. P., Minn. & Omaha	1955	1,122	7,726	8,848	5.2	32,504	2,265	1,001	29.8	607	29.5	3,252	14.5	83.1
		1954	1,089	6,761	7,850	5.1	31,739	2,179	948	29.8	612	30.5	2,971	14.7	62.9
	Duluth, Missabe & Iron Range	1955	13,717	848	14,565	1.8	85,340	5,232	3,204	65.5	1,022	30.4	26,079	17.6	87.6
		1954	14,319	688	15,007	3.6	77,280	5,295	3,185	65.6	914	27.7	24,464	15.4	83.3
	Great Northern	1955	21,498	18,242	39,740	3.1	56,253	3,077	1,555	37.2	1,443	57.1	7,202	18.6	104.6
		1954	25,464	21,308	46,772	3.1	55,529	3,224	1,599	37.6	1,221	50.3	6,565	17.4	80.6
	Minneap., St. P. & S. Ste. M.	1955	6,769	7,665	14,434	6.7	51,214	2,380	1,147	31.9	1,015	45.6	3,460	21.8	139.5
		1954	8,059	6,441	14,500	5.4	43,743	2,089	980	30.4	860	41.6	2,901	21.0	118.6
	Northern Pacific	1955	18,421	17,262	35,683	6.0	55,904	2,841	1,336	31.6	1,019	45.8	5,565	19.8	84.7
		1954	21,300	14,900	36,200	6.3	51,977	2,822	1,276	31.8	957	46.4	5,169	18.5	76.9
Central Western Region	Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.)	1955	54,782	34,545	89,327	4.1	73,220	3,151	1,146	25.1	1,082	69.4	7,218	23.3	149.6
		1954	58,529	32,630	91,159	3.4	72,185	3,045	1,143	25.7	891	54.5	6,190	23.8	113.3
	Chic., Burl. & Quincy	1955	21,624	22,024	43,648	3.3	59,191	2,859	1,278	28.6	1,005	50.4	4,996	20.7	127.9
		1954	22,129	19,099	41,228	3.2	58,653	2,780	1,244	29.3	1,060	53.1	4,917	21.1	113.9
	Chic., Rock I. & Pac.	1955	13,386	19,443	32,829	5.7	57,373	2,861	1,199	29.5	1,015	53.7	4,249	20.1	168.1
		1954	14,480	19,182	33,662	5.4	55,667	2,802	1,132	29.8	966	54.6	4,136	19.9	166.6
	Denver & R. G. Wn.	1955	8,404	5,286	13,690	4.1	66,331	3,415	1,651	32.7	1,212	53.0	7,665	19.5	102.0
		1954	9,293	3,632	12,925	5.0	64,311	3,171	1,493	31.8	1,039	45.1	6,320	20.4	80.4
	Southern Pacific	1955	29,969	43,746	73,715	1.9	61,566	3,218	1,310	27.5	1,251	68.5	11,952	19.4	116.6
		1954	29,091	48,654	77,745	2.1	61,153	3,221	1,290	28.0	1,206	67.9	11,412	19.2	114.5
	Union Pacific	1955	30,344	32,940	63,284	2.5	81,398	3,162	1,340	27.6	1,530	82.4	9,932	26.0	112.3
		1954	34,020	29,047	63,067	2.6	79,855	3,071	1,284	27.4	1,419	77.1	8,976	26.2	87.4
	Western Pacific	1955	2,310	3,854	6,164	1.8	75,976	3,119	1,392	29.5	1,724	82.0	8,857	24.5	223.8
		1954	2,945	2,578	5,523	4.5	74,358	2,941	1,362	30.8	1,780	81.3	8,093	25.4	178.6
Southwestern Region	International-Gt. Northern**	1955	899	5,643	6,542	4.3	62,736	2,942	1,323	32.2	974	46.5	5,744	21.4	116.7
		1954	758	5,517	6,275	3.0	58,532	2,834	1,232	30.6	916	47.1	5,352	20.7	102.2
	Kansas City Southern	1955	1,114	5,946	7,060	3.2	83,106	3,925	1,791	31.6	1,244	58.2	10,005	21.2	201.3
		1954	1,053	5,601	6,654	3.6	86,906	4,121	1,793	30.4	1,115	56.2	8,673	21.2	198.1
	Mo.-Kans.-Texas Lines	1955	4,965	6,795	11,760	9.9	57,865	2,733	1,163	27.5	1,078	59.5	3,843	21.2	128.5
		1954	5,789	5,991	11,780	6.5	56,551	2,625	1,103	27.8	1,038	59.3	3,759	21.6	136.1
	Missouri Pacific**	1955	19,269	19,014	38,283	3.1	71,237	3,153	1,384	30.1	1,181	59.5	6,528	22.7	96.2
		1954	22,095	18,486	40,581	2.6	67,206	3,073	1,287	29.0	1,049	56.9	5,877	21.9	88.3
	Texas & Pacific	1955	2,944	6,695	9,639	2.0	71,998	3,238	1,231	27.3	1,351	78.0	7,014	22.3	185.3
		1954	3,422	6,114	9,536	4.7	71,225	3,143	1,182	26.0	1,212	73.5	6,244	22.7	172.0
	St. Louis-San Francisco	1955	13,790	10,242	24,032	3.9	52,353	2,710	1,198	28.9	986	50.8	5,177	19.4	172.3
		1954	16,820	9,514	26,334	2.7	50,090	2,516	1,105	29.4	893	41.3	4,600	20.0	151.1
	St. Louis Southw. Lines	1955	1,827	4,508	6,335	1.8	60,202	2,945	1,317	28.0	2,075	107.1	8,839	20.5	158.3
		1954	2,708	4,057	6,765	4.0	60,050	2,878	1,287	27.8	1,794	93.5	7,711	20.9	138.8
	Texas & New Orleans	1955	5,854	18,006	23,860	1.9	59,317	2,859	1,252	30.0	1,245	63.2	6,569	20.9	169.6
		1954	7,204	15,442	22,646	1.6	55,954	2,725	1,151	29.4	1,136	61.4	5,819	20.7	124.7

* Decrease in 1955 figures due to strike.
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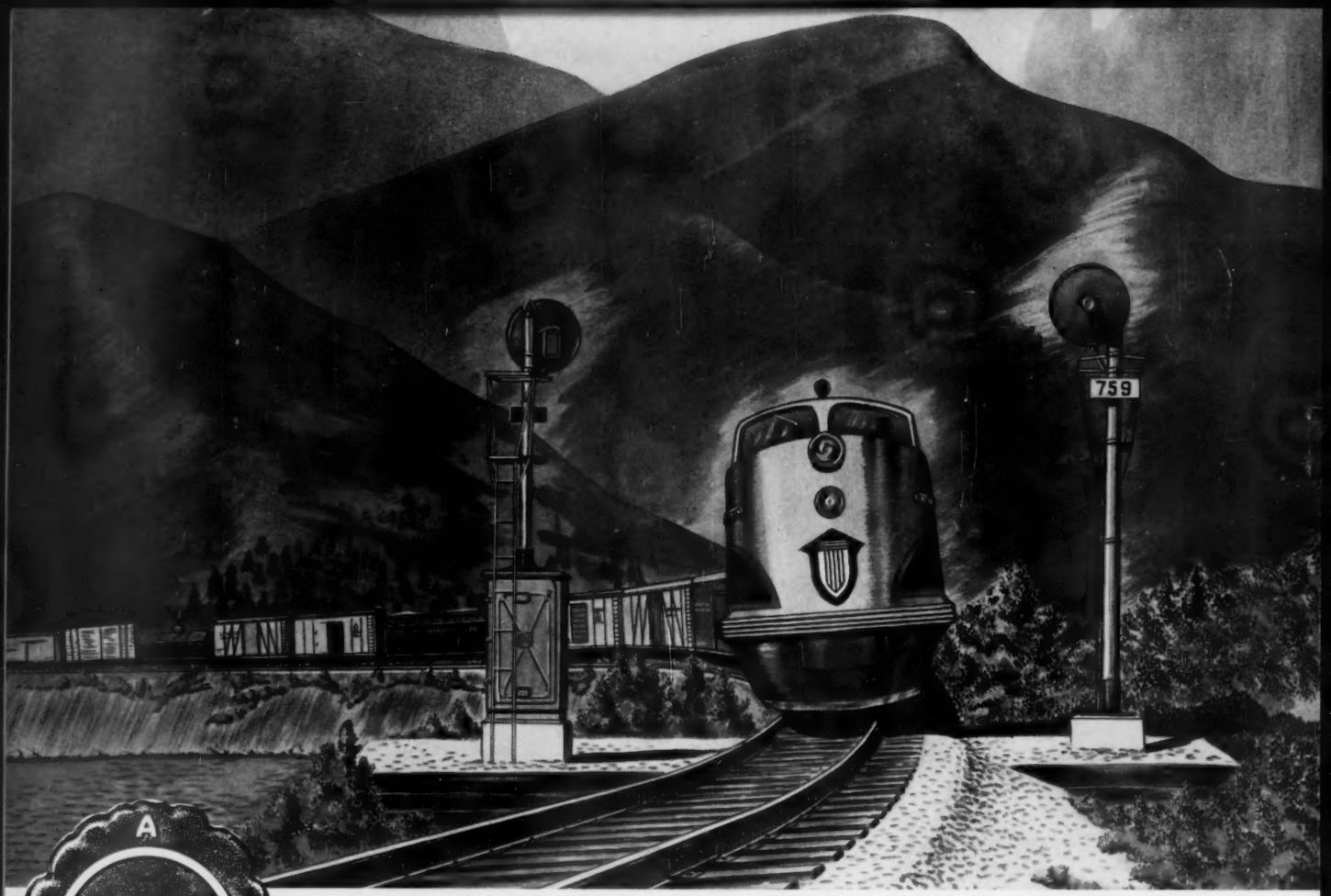

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